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Summary of Montana
Rangeland Resource
Program

1970

Montana Rangeland Resource Program



Montana State Soil Conservation Committee

Montana State Library



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SUMMARY OF
MONTANA RANGELAND RESOURCE PROGRAM

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Montana State Soil Conservation Committee

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Summary Of
MONTANA RANGELAND RESOURCE PLAN

Montana is primarily a rangeland state. Seventy percent of the area is grasslands. The largest source of income in Montana is livestock production, which is based on the grazing of these lands. Approximately 90 percent of the grazing for livestock and 65 percent of the forage for big game animals is produced on privately owned lands.

Historically, the rangelands of Montana have been overgrazed or mismanaged until today they are about one-half of their known potential.

During the past two decades, range management has been applied to the land in varying degrees and in many different ways. The result has been a pattern of fragmented management with wide variety of success and failure.

Much progress has been made where range research, information from the universities, and technical assistance have been employed. These services are high in quality and form a nucleus of very successful movement to improve Montana ranges. Coordination of existing services and extending these services to all ranges throughout the State are needed.

Rangeland Resource Plan Conceived

The enforcement of our environment and a vast potential for increased revenue are available to Montana ranchers and the general public through rangeland improvement. Realizing this, the Hill County SWCD requested the State Soil Conservation Committee to investigate the situation and to propose a plan for statewide rangeland improvement.

A special State Rangeland Resource Steering Committee was formed with Peter Jackson appointed chairman.

The Committee developed a questionnaire and sent it to all county Technical Action Panels to get an inventory of the problems at a local level. A tentative State Rangeland Resource Plan outline was constructed by Jackson and several members of the Committee. A rough draft of the proposed plan has been reviewed and approved by members of the Steering Committee, State Soil Conservation Committee and heads of various State and Federal Agencies.

Content of Plan

The plan includes the following material:

1. A list of persons and organizations who have responsibilities to range management.

- a. Private landholders
 - b. State agencies
 - c. Federal agencies
 - d. Technical assistance available
 - e. Private organizations
2. Basic data necessary to make plan operable.
- a. Soil and range surveys
 - b. Topographic maps
 - c. Climatic information
 - d. Range condition
 - e. Livestock and wildlife inventory
 - f. List of recreation uses on rangeland
3. Today's major demands and uses of Montana rangelands.
- a. Livestock forage
 - b. Wildlife habitat
 - c. High quality water production
 - d. Pollution control
 - e. Erosion control
 - f. Recreation uses
 - g. Natural beauty of State
 - h. Site for urban and industrial areas
4. Goals set for completion by 1980.
- a. Eighty percent of the range under intensive management planning
 - b. Fifty percent of the range in excellent condition and thirty percent in good condition
 - c. Forty percent increase in usable forage
 - d. The stockwater potential eighty percent developed with the balance of being improved
 - e. Five-fold increase in recreational use
 - f. An improved wildlife habitat on native ranges to provide a more stable wildlife population.

Each goal is considered in the plan with the situation described, the goal stated clearly, the approach listed, monetary returns projected, and a timetable for progress.

Environmental enhancement for the public is included to show the importance of range and a Rangeland Resource Plan for all the people of the State.

Range Improvement is Important

A primary benefit that will come directly from range improvement will be a significant reduction of soil losses from wind and water erosion on rangeland. Water and air pollution will be minimized. Stream flow stabil-

ization and a clean, sediment free water supply will provide for future expansion of urban and recreational needs. Range improvement will add to the natural beauty of the State and hopefully attract more tourists to improve the economy.

To the people of Montana the most important direct benefit from range improvement is the increase of cash flow. Cost and return figures on livestock operations carried out by ranchers assisted by Soil Conservation Districts show that if each acre below good condition class were improved to good or excellent condition and properly managed, the annual net return would amount to nearly 70 million dollars additional increase to Montana each year, just through the sale of livestock products resulting from range improvement.

The present annual income from tourists and of our State recreationists amounts to about \$125,000,000. Space is needed for outdoor recreation and could be enhanced with improved range conditions and a change in ranch management operations. Ranchers have a golden opportunity to supplement their regular income by taking advantage of recreational opportunities such as paid guide services, pack trips, family ranch vacations, hunting, fishing and camping privileges, etc. These enterprises plus the necessary supporting businesses such as motels, hotels, restaurants, sporting goods stores, etc. would add materially to the annual income of the State.

Simultaneously, an increased tax base will be established. Revenue from income tax will be increased by an impressive amount. Property values can be expected to increase and be stabilized with the improvement of range conditions and development of recreation facilities. Tax revenue from eventual increased livestock numbers resulting from range improvement will be appreciable.

Other benefits will be savings of money and environmental improvement from reduction of pollution and erosion from the rangelands. There should be lower maintenance costs on city water supply systems, less pollution in streams and lakes and less flood damage. A high quality, stabilized water supply will make water development for both urban and rural areas much cheaper and more dependable.

Implementation of the Plan

In putting together the Montana Range Resources Plan proposal, apparent conflicting situations were considered.

Any plan that affects such a large industry as agriculture in Montana requires the approval and participation of the primary person affected, which is the land occupier or rancher.

To get this support, it is necessary to strictly adhere to the basic fundamental concept of freedom for an individual to work and live in his own way and to provide a living for his family, provided he does not encroach on the freedom of others. With this freedom goes the responsibility of a citizen to

protect the natural resource of his land so all people will have the same privileges to live and work in the free manner we enjoy today.

Those who are responsible for safeguarding the land are entitled to technical assistance, advice and guidance in management and use of the resources which is now provided by State and Federal agencies in Montana. With this in mind, this plan is based on counsel and advice from knowledgeable people in the field. If people are properly informed, management planning is coordinated between private landowners and public land management agencies. Then proper range management of native ranges can become a reality without the need for additional rules and regulations.

To accomplish the goals outlined in the plan, the first and most important need is for coordination. Coordination of the plan will require the services of a qualified coordinator. He will need to have a good practical working knowledge of ranch operations. He needs to have an understanding of the many uses and purposes for which range is suited as well as the needs of non-ranchers who need space for recreation and environmental quality. The ability to communicate and to negotiate between ranchers, agencies and other affected parties is a necessary qualification of the coordinator.

A few examples of the duties of the Coordinator would be:

1. To assist ranchers and recreationists to become more compatible.
2. Work to improve conditions to minimize weaknesses in fire protection, vandalism, litter and public liability.
3. To make more effective use of existing services in planning, research and education from the existing agencies and institutions.
4. Provide assistance to the legal profession for drawing up sale contracts, leases and endowments, etc. that will include range management to be applied to affected lands.
5. To provide consultation on the following projects:
 - a. Reclaiming mined over areas and exploratory prospect disturbances for minerals, coal and oil.
 - b. Urban beautification plans in range settings.
 - c. Highway beautification plans in range areas.
 - d. Municipal or industrial water supply.
 - e. Waste disposal area reclamation.
 - f. Sediment reduction and pollution prevention and abatement.
 - g. Other projects listed in the unabridged State Rangeland Resource Plan.

The program will be financed and supervised by the State Soil Conservation Committee. The SSCC will be responsible for hiring a qualified Coordinator and supervising his activities in carrying out the State Rangeland Resource Program.

Advisory responsibility and guidance will be secured from a council of ranchers and authorized representatives of State and Federal agencies and other organizations interested in rangeland management.

Conclusion

Application of this proposed State Rangeland Resource Plan will be a "first." Never before has general broad area planning of the grassland ecosystem been attempted on this large a scale.

The opportunity is here; the need is great; the goals are high. The challenge can be met through the properly coordinated, sincere efforts of all who will benefit from this important program.

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Montana Rangeland Resource Program

FOREWORD

Montana is blessed with vast areas of beautiful, clean open space. This space should be managed so the grass will grow tall and green and abound with herds of livestock and wild game that will be fat, sleek and plentiful.

This can be a reality through cooperation, and application of common sense and technical knowledge.

Livestock production is the major income producing industry in the State. The sale of cattle and sheep adds about \$250,000,000 in income each year. The potential for income from recreation and aesthetic values has hardly been tapped. The ranchers' income from livestock and uses other than livestock production can be increased many times.

Montana has 54 million acres of rangelands and $11\frac{1}{2}$ million acres of grazeable timber lands. This is 70% of the total area in our State.

When Montana was settled in the late 1800's these rangelands were considered of little economic value because it was not possible to crop or log them for a profit. The rangeland was indiscriminately loaded with livestock and in many instances badly abused by overgrazing, plowing and general disregard for the natural range resources.

In recent years many individuals, with the help of agencies, have been doing a good job of rebuilding these lands, but there is still much to be done. It is the purpose of this plan to correlate, coordinate, and advise and counsel the range management efforts of today.

With improved rangeland management Montana's ranching economy can increase by many millions of dollars. This can be accomplished while providing additional recreation opportunities and giving permanent protection to the renewable natural resources for today's people and the generations to come.

STATE RANGE RESOURCE PROGRAM

TABLE OF CONTENTS

Forward by Peter Jackson, Development Committee Chairman	1
Table of Contents	2
Introduction by Dean Hanson S.S.C.C.	4
Development and Steering Committee	6
Persons and Groups Responsible for Rangelands	7
Major Demands and Uses of Montana's Rangelands	9
Goals for Rangeland Improvement in Montana	13
Guidelines for Implementation	
1. Ranch Management Planning	14
2. Range Condition on Native Ranges	17
3. Native Ranges Producing 40% More Usable Forage by 1980	20
4. Water Development on Native Ranges	22
5. Improvement of Wildlife Habitat on Native Ranges	25
6. Recreational Use of Native Range	27
Environmental Enhancement	30
Implementation of Program	31
The Coordinator	32
Specific Projects	34
Program Recommendations of a General Nature	35
Miscellaneous Coincidental Projects	37
Economic Impact of Range Improvement in Montana	38

TABLE OF CONTENTS

(continued)

Statements of Support to Plan	41
Overview	49
Appendix I	51
Appendix II	68

INTRODUCTION

AN IDEA IS BORN:

Realizing the serious degradation of our rangelands and the vast potential for a new source of revenue becoming available to the Montana rancher and farmer through improved management and renewal planning on our rangelands, the Hill County Soil and Water Conservation District felt it necessary and vital, in their District, to seek means of improving Hill County's rangelands.

After considering the several sources of assistance available and noting it was not a problem unique to Hill County, they decided it would be a most worthwhile endeavor, and a real potential for increasing the income to all farmers and ranchers, as well as to the State of Montana, if it were a state-wide program.

With this thought in mind they embarked upon a plan to further their cause. On April 16, 1969 they made a formal request to the Montana State Soil Conservation Committee to make a study of the range resources potential and to coordinate a comprehensive development program with other agencies and organizations. This study was to include all rangelands in Montana.

The State Soil Conservation Committee, because they are an agency of State government, was designated to handle the task. They are, by legislation mandate, to offer assistance to coordinate programs and disseminate information throughout the State concerning the activities and programs of Montana's Soil and Water Conservation Districts. Further, they may request assistance from any State and Federal agency, for the purpose of carrying out any of their assigned functions.

On June 2, 1969, at their regular meeting, the request was formally acted upon by the State Committee. At that time Mr. Peter Jackson, rancher and SWCD Supervisor, was named by the State Committee Chairman to select a steering committee and utilize all available means to draft a rangeland improvement plan to be submitted to Governor Anderson for his approval.

The State Soil Conservation Committee commends the Hill County Soil and Water Conservation District Supervisor's for their forward look and deep concern about a resource matter so vital to the State. The Committee is fully aware of the beneficial effect such a state wide programming may have, if properly utilized and if recommended developments are eventually incorporated on the land. Governor Anderson and his staff have expressed their concern for proper use of resources in the State, so people today and those tomorrow may continue to benefit to the fullest degree.

As Chairman of the State Soil Conservation Committee, I feel a great void would exist in the potential improvement of our State, if we neglect to do anything less than a 100% job for Soil and Water Conservation Districts and the State of Montana.

We have committed our full support to Governor Anderson, to assist him in his endeavor for total commitment of State Government to the best interests of all peoples of the State. We are proud to be a part of his team -- we will diligently strive to fulfill the task we have been assigned.

Dean A. Hanson, Chairman
State Soil Conservation Committee

STATE RANGE RESOURCE PROGRAM

DEVELOPMENT AND STEERING COMMITTEE

Chairman Peter Jackson - Harrison -- rancher - Soil and Water Conservation District Supervisor
 Torlief Aasheim - Bozeman -- Cooperative Extension Service
 Howard Foulger - Missoula -- United States Forest Service
 J. A. Asleson - Bozeman -- Dean of Agriculture, Montana State University
 Norman Wheeler - Bozeman -- Farmers Home Administration
 Mons Tiegen - Helena -- Montana Stockgrowers Association
 Richard Draper - Helena -- Department of Planning and Economic Development
 John Schroeder - Lolo -- rancher
 A. B. Linford - Bozeman -- Soil Conservation Service
 Melvin S. Morris - Missoula -- School of Forestry, University of Montana
 Frank H. Dunkle - Helena -- Montana Fish and Game Department
 Ted Schwinden - Helena -- Department of State Lands and Investments
 Charles Jarecki - Polson -- rancher
 Edwin Zaidlicz - Billings -- Bureau of Land Management
 David Smith - Helena -- Montana Woolgrowers Association
 Gareth C. Moon - Missoula -- State Forestry Department

WORKING SUB-COMMITTEE

Peter Jackson - Chairman
 Torlief Aasheim - Cooperative Extension Service
 Amos Garrison - Representing Soil Conservation Service
 Jim Posewitz - Representing Fish and Game Department
 Rex Cleary - Representing Bureau of Land Management
 Wayne Gibson - Representing agricultural lenders
 Gene Payne - Representing Montana State University
 Anthony Geis - Agricultural Stabilization and Conservation Service
 Robert L. Ross - Secretary, Soil Conservation Service

PERSONS AND GROUPS WHO HAVE RESPONSIBILITIES FOR RANGELAND MANAGEMENT

Following is a list of private individuals, groups, and organizations that have responsibility in the management of our grazing lands. In the appendixes is a section that briefly describes the responsibilities of the categories listed.

- A. Private land holders
 - 1. Individual Ranch Owners - Operators
 - 2. Absentee Owners
 - 3. Renters and Share Croppers
 - 4. Corporation (Example: Anaconda Company, St. Regis Paper Co., etc.)
 - 5. Grazing Association (FHA financed)
 - 6. Project Area (SWCD sponsored)
 - 7. Indian Reservations
 - 8. Railroads, etc. (Utilities)
- B. State of Montana
 - 1. Department of State Lands and Investments
 - 2. Montana Fish and Game Department
 - 3. Montana Grass Conservation Commission
 - 4. Recreation and Parks Division of F&G Commission
 - 5. Soil and Water Conservation Districts
 - 6. State Forestry Department
 - 7. State Experiment Station
 - 8. University Lands
- C. Federal
 - 1. Forest Service
 - 2. Bureau of Land Management
 - 3. Bureau of Indian Affairs
 - 4. National Park Service
 - 5. Bureau of Reclamation
 - 6. Bureau of Sport Fisheries and Wildlife
 - 7. Agriculture Research Service
 - 8. Army Corp of Engineers
- D. Technical Assistance
 - 1. Soil Conservation Service
 - 2. Cooperative Extension Service
 - 3. Montana State University Department of Animal Science and Range Management
 - 4. University of Montana School of Forestry
- E. Financial Responsibilities
 - 1. Individual Land Owner - Operator
 - 2. Banks
 - 3. P.C.A. (Production Credit Association)
 - 4. F.H.A. (Farm Home Administration)

5. Insurance Company Loans
6. Federal Land Bank, etc.
7. ACP (Agricultural Stabilization Conservation Service)
8. Great Plains (Soil Conservation Service)

F. Private Organizations Interested in Range Management

1. Society for Range Management
2. Montana Association of Soil and Water Conservation Districts
3. Rural Area Development
4. Agricultural Lenders Range School
5. Montana Conservation Council
6. Wildlife Federation
7. Rod and Gun Club
8. Montana Stockgrowers Association
9. Montana Woolgrowers Association
10. Montana Cattlemen's Association

THE MAJOR DEMANDS AND USES OF MONTANA'S RANGELANDS

History tells us that Montana was a paradise for native birds, animals and the Indian people. Grass was lush and water was clean. It was selfsupporting for its inhabitants with nature in balance.

Then the white man came and things changed rapidly, mostly for the worse. During the last few years these degrading conditions have been reversed and improvement of the environment has started to take place. Simultaneously a new set of factors have been quietly taking shape. The population of our state has risen steadily and today their increasing demands have placed new responsibilities on every acre of land. This has created a need for broad are resource planning.

To more ably describe the situation this section lists and briefly explain the demands and responsibilities of the rangelands today.

Livestock Forage

The largest single demand on Montana's rangelands today is increased production of forage for domestic livestock.

The products of the livestock industry are in strong demand. This demand plus the high cost of production forces the stockman to run the maximum number of animals he can possibly sustain.

Today Montana's rangeland resource is absorbing this pressure and, on the average, the condition of the vegetation is improving slightly. However, statistics show the pressure of more people and all their needs are going to become greater each year.

In the near future the rangelands of Montana will need to produce forage for a much larger number of domestic animals.

It is felt that the demand for livestock forage on Montana's rangelands will grow steadily stronger in the future and will continue to be the number one demand for the next several years.

Wildlife Habitat and Forage Supply

Montana's rangelands are the native home of a large number and variety of wildlife.

The number and species have fluctuated greatly over the years since the white man came. During the first part of this century their numbers decreased until nearly every kind of animal was in short supply. This situation alarmed many people and laws were written for their protection.

This demand is an important one. As the human population increases there appears to be a greater interest and desire for more wildlife. Our increased knowledge of ecology and environment indicates that a nature balance is a key to the survival of man.

It has been concluded that the need for wildlife will continue to grow for years to come and if this demand, coupled with others, is to be met, range-land conditions must be improved at an accelerated rate to protect this resource.

Water Production

Water production has, in the past, been given too little attention as a responsibility of the rangelands.

Until recent years water was abundant and little thought was given to it except in times of flood or extreme drought. Today increased numbers of people are demanding water in previously unheard of quantities. These demands will continue to expand.

Montana is a major upstream producer of fresh water. The vast acreage of rangeland (70% of the land area) is tremendously important from a water production standpoint.

A more dependable flow of water can be received from rangelands only if a protective cover of vegetation is maintained year around. This requirement does not restrict the harvest of grass, but does require that a good grass condition be maintained at all times.

Increased water production will be obtained where there is a good vegetative ground cover. Under these conditions runoff is controlled and stream flow is maintained on a year around basis. Thus, a dependable supply of water is assured.

In the future, the rangelands will be expected to produce the maximum amount of good clean water. Good vegetation management planning will help assure our reaching that goal.

Pollution Control

Pollution is being recognized today for what it is - a danger to the health and prosperity of our country. It is the responsibility of every person in the state and nation to be sure that all necessary pollution control measures are taken.

Generally, Montana's rangelands are not heavy contributors to water pollution but if allowed to deteriorate to low condition they can very well create havoc with our streams and rivers by choking them with silt.

Pollution on rangeland is easily controlled by maintaining the vegetation in good condition.

In the future pollution abatement and control must be considered one of the major responsibilities of and demands on Montana's rangelands.

Soil Erosion Control

The problems arising from soil erosion were overlooked in the process of settling our nation. In recent years, when the last frontiers were opened and we awoke to the realization that there is an end to the supply of soil, we began to show our concern for the resource that in one form produces all our food and fiber.

Many thousands of acres of rangeland in the nation and Montana have been badly eroded by wind and water with the resulting loss of untold dollars worth of top soil.

Our nation can no longer overlook the loss of this important resource. It is imperative that our rangelands be protected from erosion at all times.

This can be successfully done with good vegetative cover maintained in a condition that will stop wind erosion in times of drought and water erosion during flood or natural spring runoff periods.

Recreational Area for Public

The need for recreation has increased with the rapidly expanding population. Today people have more time to enjoy themselves than ever before. This creates another demand on the land in addition to the production of food and fiber.

The agricultural and forest lands are limited as to the number of people that can live and travel on them. Therefore, the rangelands are being looked to as areas where recreation activities can be enjoyed.

To the surprise of many people, the rangelands are well suited to this new and additional demand. These lands, when they are in a good condition, support large numbers and kinds of wildlife and are easily seen and enjoyed.

Rangelands abound in many other interesting recreational values such as scenic beauty, hunting and fishing opportunities, artifacts, historic sites, gems, etc. They also provide vast open spaces for the quiet and solitude that becomes necessary as our population increases.

Montana's rangelands, handled and cared for in prudent manner with due respect for their fragile condition, can easily supply the increased demands that recreation will place upon them.

Natural Beauty

Properly managed rangelands are a beautiful sight to behold.

The early explorers and pioneers wrote in their diaries of the wonderful waving seas of grass spotted with patches of shrubs and trees.

Now that the land is settled we are once again thinking of having a more attractive land to live in.

People today are demanding beauty in their homes, business and recreation areas. The demand for natural beauty ranks high in the list of environmental values. Environmental quality has come into its rightful place of importance in the scheme of things.

The responsibility for natural beauty on rangelands can be fulfilled by maintaining a cover of grass that will enhance the setting of towns, urban developments and recreation areas. Well maintained grasslands provide a beautiful backdrop for everyone - both urban and rural.

Future Urban and Industrial Areas

The expanding population and demands for goods and services are rapidly using the available areas left in the agricultural lands that are not essential for food and fiber production. Zoning laws are being passed and enforced in nearly every state in the union.

With all these curtailments the rangelands are logical areas for expansion for urban and industrial growth.

The impact of this demand is serious because the rangelands are usually in fragile areas and this type of development is difficult to control with the press of modern transportation and large numbers of people.

Strict control must be exercised if these demands on the rangelands are to be met causing severe erosion and pollution with all the attendant hazards and problems.

Zoning regulations and enforcement, along with intensive management, are logical methods for meeting this demand.

GOALS FOR RANGELAND MANAGEMENT IN MONTANA

This section sets out the goals, objectives, and direction of the Montana Rangeland Program.

It is not the intent of the program to adhere strictly to the letter in each goal, but instead, to aim for the objectives and surpass the goals if possible.

Should additional or alternative goals and objectives become necessary, changes should take place.

A portion of this section is devoted to a detailed discussion of each goal. The situation is described, the goal set, the approach for gaining the goal outlined, the income potential from the completion of the goal is established, and finally, a time table is forecast.

In this section lies the heart of the entire program, for action is the key to attaining progress.

GOALS

1. By the year 1980, 80% of the pastures and native ranges will be operated under some form of intensive management planning.
2. By the year 1980, 50% of the native ranges will be in excellent condition and 30% in good condition.
3. Native range and pastures will be producing 40% more usable forage by 1980.
4. By the year 1980, 80% of the native ranges will have stockwater fully developed, plus the remaining 30% being developed.
5. By the year 1980, recreational use of the range grass will increase by 500%.
6. By 1980, the wildlife habitat on native ranges will be improved to provide a more stable wildlife population.

Guidelines For Implementing Goal No. 1

RANCH MANAGEMENT PLANNING

Situation

To be economically sound, total unit ranch planning is necessary in developing range resource management plans. All grazing animals need to be considered and a balanced forage resource program developed. The end result means hastening improvement of native rangeland, making full use of the productive potential of the arable land and, ultimately, increasing the ranch income.

Ranchers find it pays to systematically inventory their ranch resources and then balance land use with grazing animal numbers to sustain natural resources.

Range improvements on private lands show that in recent years many ranchers have been doing a good job of developing and carrying out management plans. Nearly 5,000 ranchers have developed conservation plans on more than 24,000,000 acres of rangeland in cooperation with the Soil Conservation Service.

State and Federal agencies such as Forest Service, Bureau of Land Management, State Land Department, Bureau of Sport Fisheries and Wildlife, Fish and Game, and Bureau of Indian Affairs develop and carry out management plans on lands they administer in cooperation with their leasees or permittees.

Goal

To have 80% of Montana's native ranges operating under some form of intensive management planning by the year 1980.

Approach

Management plans will naturally vary with each ranch unit and therefore should be based on the needs of the individual ranch operation.

Memoranda of Agreement between Federal, State and private participants will be encouraged to coordinate the efforts in cooperative planning on interspersed ownership patterns within the same management unit.

To develop a range management plan, the following items should be considered:

- A. Obtain a resource inventory of the entire unit.

1. Soil
2. Climate
3. Range site and condition - acres
4. Dryland pasture - acres
5. Irrigated pasture - acres
6. Hay acres
7. Cropland - acres
8. Physical layout: fences, pastures, stockwater developments, etc.
9. Type of operation: cattle, sheep, wildlife, cow-calf, etc.
10. Capital and credit available
11. Ownership and tenure arrangement

B. Present method of operation.

1. Present balance of range, tame pasture, hay and animal numbers
2. Complete budget arrangement

C. Alternatives in the process of planning.

1. Land use adjustments necessary
2. Balance feed, forage and animal numbers
3. Range practices (proper use, grazing systems, brush control, fencing, stockwater development, range seeding, etc.)

D. Planned decisions of the operator or manager.

Technical assistance in resource planning is available to ranchers and State and Federal agencies from the Extension Service, Soil Conservation Service, and private range consultants.

The Bureau of Land Management and Forest Service are developing intensive management plans on as many grazing units of their lands as time and finances permit.

It is essential that affected agencies and ranchers work closely together in a coordinated effort to implement the goal of intensive management plans on rangeland.

Accomplishment of this goal will result in the highest practical returns in terms of forage production for livestock or game animals, recreation values, and watershed protection. It will minimize erosion and pollution programs and increase aesthetic values and help to stabilize the ranching economy and the rural community.

The economic potential from intensive management planning can amount to several millions of dollars in annual increased income to the State from the livestock industry. The income from uses other than livestock production can be increased several times. Monetary savings from erosion and pollution control and the value of water production and stabilization would also be great.

Time Table for Planning Goals

Rangeland Planned

50% by 1974

60% by 1976

70% by 1978

80% by 1980

Guidelines for Implementing Goal No. 2

RANGE CONDITION ON NATIVE RANGES

Situation 1970

In general, the native ranges today are in the following condition: 20% in good condition, 38% in fair condition and 10% in poor condition.

Based on normal climatic conditions and available historical data these figures show that we are producing only 32% of our potential.

Concentrated management efforts are being applied by the federal agencies and many ranchers. More effort is needed.

Management plans and improvement practices are being initiated on state lands.

There are excellent schools of Management in the Universities. Enrollment in both undergraduate and graduate courses will need to be increased to meet the future demands for rangeland resource management. Research is being carried on by the Universities, Extension Service and Federal agencies. A rough estimate is that the research being done today is 35% of the need.

Lending agencies are showing interest by sponsoring an Agricultural Lender's range school and hiring good Agricultural Representatives. Their increased knowledge of range management is definitely an asset to the industry.

However, some lending agencies still base their financial statements on cow numbers rather than calf crop percentages, market weights, range condition, and other resource management factors.

The industry as a whole is now at the point where range management is being seriously considered as an art and a science.

Goal For Range Condition on Montana's Native Ranges

By the year 1980:

50% of the range in excellent condition
30% in good condition
20% in fair or poor condition, but improving

Approaches to Use to Increase General Range Condition

Education must receive the highest priority. Ranchers are recognizing the fact that range management pays, but far too slowly. A well coordinated educational program should be developed by the schools (all levels) and agencies.

Demonstration areas at strategic locations should be developed as a joint effort by all agencies.

Banker and rancher range schools should be quadrupled in number and spaced conveniently about the State. The attendance at range schools should not exceed about 50 participants for peak efficiency.

A joint drive should be coordinated by agencies to acquaint all persons in related industries and urban areas to the importance of range management and the economic and aesthetic value of good to excellent condition range.

The legal profession should be schooled in the importance of range management. In addition legal language should be developed to enable incorporating range management clauses and phraseology as standard statements in contracts, leases, and other land management agreements for ranch units.

Soil and Water Conservation Districts should consider hiring range specialists when the work load requires extra manpower for implementation and follow up.

Project areas can be created to plan and carry out large range management projects such as complex stockwater development, large reseeding areas and timber and brush control projects. Such projects would involve and benefit ranches or whole communities.

Memoranda of Agreement should be entered into between persons and agencies to insure that projects will not conflict with each other from lack of planning or joint approach, also to stop the possibility of a project damaging one area while improving an adjacent area.

All persons responsible for range management and development in Montana should take part in a symposium on grasslands. The function of the symposium would be to develop acceptable methods, specifications and work procedures that will be used by all in a common attack on range problems.

A firm, enforceable set of practical range management regulations should be developed by the State Land commissioner to instill good, up-to-date management on school trust rangelands. State planning agencies should be persuaded to apply their efforts on the basis of the importance, size and potential of the natural resources in Montana.

ASCS practices should be developed to help accelerate improvement in range condition.

Great Plains contracts should continue to emphasize range improvement.

FHA should give a high priority to range improvement loans.

Financial Impact of Range Condition Improvement:

Increased value of improved land
 Increased livestock numbers
 More pounds of livestock products produced as a result of increased lamb
 and calf crop percentages and heavier marketing weights
 Tax base increase
 Natural beauty value

The above items will make a direct contribution to the general economy of the state of Montana by several millions of dollars annually.

Time Table for Goal Implementation:

Public land to be in 50% excellent, 30% good and 20% fair by 1978.

Private land:

	Excellent	Good	Fair	Poor
1974	30%	30%	30%	10%
1976	40%	30%	20%	10%
1978	45%	30%	15%	10%
1980	50%	30%	15%	5%

Guidelines for Implementing Goal No. 3

NATIVE RANGES PRODUCING 40% MORE USABLE FORAGE BY 1980

Situation:

The amount and quality of usable forage is directly related to the condition of the native ranges and pastures.

Today Montana is producing a grass crop that is far short of potential capacity in both quantity and quality. Under natural conditions the principal controlling factors are use, soil, water and temperature.

The largest single factor effecting range condition is grazing use. Use also dictates the quality of feed still remaining to be harvested because the plants that resist overgrazing usually are poor in both production and nutrients.

Large areas of our range and pasture lands have been farmed for short periods of time with dismal results. These lands are often left to recover as best they can with whatever help nature can provide. During recent years, a large acreage of these lands have been seeded to various kinds of tame grasses whose life span and total production leave a great deal to be desired.

Research in grass varieties have been pushed forward in the last decade until today the possibilities for increased production are excellent.

Goals:

To increase range and pasture forage production by 40% by 1980.

Approach to Accomplish Goal on Forage Production:

A large percentage of the increase in production from ranges and pastures will be accomplished by rebuilding the range condition through application of proven practices. Examples of these are rest rotation, deferred grazing, fencing and brush or timber control. In many areas weed control will aid in improving range condition.

Application of these practices or methods will account for a large percentage of the potential increase of usable forage.

To further increase production from these lands, we must expand and improve on nature's methods.

During the last twenty years tremendous advances have been made in reseeding, fertilizing and water retention practices. Many of these are still in the experimental stage, but a great number are proven and should be promoted to get extra production.

We need more knowledge about which artificial practices are, or could be, the most productive and practical.

Educational programs should be broadened and intensified to get more action in range improvement practices such as deferred growing grass, seeding, renovation, scalping, stockwater developments, cross fencing, and intensive grazing systems.

More tours could be promoted on the experiment stations, Agricultural Research Centers and Plant Materials Centers to acquaint ranchers with the most modern concepts available.

Many more demonstration plots and ranches are needed to show ranchers and the general public the potential possibilities in their home area. Agencies should promote the use of native grass seed wherever practical. In isolated cases where soil moisture is adequate, field trails on fertilizers should be promoted on seeded areas.

Cultivating and reseeding of poor condition native ranges may be the answer since existing species will take too long to gain the necessary forage increase.

Financial Impact From Useable Forage Increase

The largest economic increase from forage will be in domestic livestock numbers.

A definite increase in weaning weights will be realized from higher quality feeds.

The result will be more pounds of meat produced from the range.

Time Table for Goal No. 3

Public lands should have gained their increased forage by 1978.

Private Lands:

1974	15% increase of useable forage
1976	20%
1978	30%
1980	40%

Guidelines For Implementation of Goal No. 4

WATER DEVELOPMENT ON NATIVE RANGES

Situation:

Montana is a land of extremes. Our weather has a wide range both in heat and cold, dry and wet, windy and calm. The vegetative cover, erosion and sediment production on the rangelands are directly affected by these extremes.

In the process of harvesting the maximum grass crop from our rangelands with livestock and wildlife one of the most important factors is a good supply of usable water, strategically located.

Research, in recent years, has been conducted on grazing patterns and the result in pounds of gain, calving percent and percent of conception. The results of this research clearly show the importance of water, its amount and location. For example, excellent condition range with an ample supply of drinking water will significantly out produce the same type area where animals must travel excessive distances to water.

This effect is further complicated by weather conditions. When animals have to travel a long way in hot weather, their gains are cut severely and in extreme cases weight is lost.

The same holds true during periods of cold weather. Animals can digest rough feed and make gains in cold weather if their supply of water is open, convenient, and plentiful.

To obtain the maximum efficiency in grazing distribution and harvesting of the grass, water is a significant factor and it must be seriously considered in all range planning and development.

During recent years, improvements by industry and advancement in research have opened the door to new and dramatic changes in our approach to water development on our rangelands.

With the development of plastic pipe, which can be installed by machine, water can be economically piped great distances. In many cases, several operators or a combination of ranchers and agencies can join together in projects to develop large range areas that are little used because of inadequate water.

Goal:

By the year 1980, 80% of the native range will have a fully developed water supply, and the remaining 20% will be in the process of being developed.

Approach to Accomplishing Water Development Goals:

The distance that animals will travel for water depends upon the terrain, weather conditions and kind of animals. For peak performance and gains, cattle should not have to travel more than about one-half mile.

Springs, where available, are the most practical type of water development. Even when springs are available and in the proper location, they need to be developed and piped into troughs to assure maximum gain in weight and sanitation conditions.

Animals that have to wait hours to satisfy their thirst lose time that should be spent grazing. Therefore, ranchers and agencies should be encouraged to properly develop the available water to its maximum.

Agencies such as Soil Conservation Service and the Extension Service should place high priority on promoting these rangeland water development projects.

Ranchers and agencies should be encouraged to coordinate planning of management practices that potentially will benefit one another. A good cooperative plan in many cases, can help everyone tremendously in both land development and good relationships between neighbors.

Under certain conditions land exchanges may give proper water distribution. These should be considered whenever possible. Planning agencies and ranchers should consider this possibility whenever it occurs.

Many unusual stockwater situations can be solved with ingenuity and planning. Examples are pumps powered by water wheels that can be geared to raise water to great heights. Hydraulic rams are also effective in many cases. These installations are reasonably priced and maintenance costs are low. When management plans are being prepared, this type of development should be given serious consideration.

Where groundwater is unavailable by springs, pipelines or wells, then artificial watersheds to collect and store runoff water should be considered and planned. Artificial watersheds are expensive, but to get good water supplies for livestock and wildlife, they may be necessary to gain full development of a range area.

There are many other ways to develop water not described here. The University or Extension Service will be urged to compile a catalog of stockwater development ideas.

Financial Impact of Water Development

Full development of remote ungrazed areas or partially grazed sites will allow for an increase in cow numbers.

Well developed ranges will produce more pounds of beef, higher percentage calf crops and more winter grazing that will cut expenses. It will also enhance the wildlife habitat.

Erosion and sediment will be cut somewhat by the animals doing less trailing to and from water.

Time Table for Goal No. 4

1975	70% of water developed
1978	80% of water developed
1980	remaining 20% being planned for development

Guidelines For Implementation of Goal No. 5

IMPROVEMENT OF WILDLIFE HABITAT ON NATIVE RANGES

Situation 1970:

Montana has always been famous for its wildlife. Early history infers the plains and mountains abounded with elk, antelope, deer and buffalo while the streams had large numbers of waterfowl, beaver and fish.

The settling of Montana drastically changed all this. Although the pioneers, homesteaders and miners for many years lived off the game or supplemented their diet with wild meat, the greatest impact on wildlife was the lateration or in some cases destruction of wildlife habitat. Since that time, game laws, protected areas and parks have aided wildlife to return and to increase in numbers.

There is a tendency to refer to wildlife in the number of elk, deer and waterfowl. This is a meaningless term Wildlife are dependent on and products of their habitat. The quality and quantity of the habitat is a more meaningful measure of the health of a wildlife population.

Montana is blessed with hundreds of animals and birds that could be increased in numbers and perhaps even variety if the habitat were improved. Such birds as grouse, ducks, geese , songbirds, etc., would increase in number if the situation were favorable. Small animals that ordinarily do little harm and usually much good should be restored to numbers in balance with conditions of today.

Man's presence must be taken into consideration. There will never be as many as the original numbers of some species such as the buffalo, but a reasonable balance can be obtained with planning and development.

Goal:

By 1980 the wildlife habitat on native ranges will be improved to encourage more stable wildlife populations.

Approach to Implement Wildlife Goal No. 5:

The first and by far the most important item necessary to create or maintain a good wildlife population is an excellent vegetative cover. This will come as the Montana Range Resource Plan progresses with its primary objective, which is improved range condition.

Range management planning can easily accomodate wildlife in wide variety by taking into consideration the basic requirements of the wildlife, particularly their needs for food and shelter.

Ranchers with management plans that provide for ample forage can more easily set aside reasonable areas that have wildlife habitat at their highest production.

These plans are more easily implemented when the hard competition for every spear of grass is eliminated.

Curbs on some types of animals may be necessary to provide a good working and living balance. Wildlife, like livestock must be kept in balance with their food supplies. In most instances, some hunter harvest of wildlife must occur.

Ranges in good to excellent condition can easily support an innumerable variety of small birds and animals in large numbers with little competition among species.

A certain amount of joint planning and educational programs would need to be put into action by specialized agencies and groups to arrive at proper densities.

Financial Impact From Implementation of Goal No. 5:

There will be financial improvements in the general overall area of the State. These are quite difficult to separate from other general income categories.

Increased numbers of game always draw more sportsmen -- and their money -- which is a direct benefit.

A situation of widespread game will also tend to draw additional people, who will be more evenly spread over the entire State.

Large varieties of birds and animals and improved scenic beauty may draw people to Montana who are interested in such things as photography and other aesthetic values.

Time Table for Goal No. 5:

Because of the close correlation between range condition and animal numbers, a time table is not reasonable.

Education programs and range plans should begin immediately and continue indefinitely. This is one situation that never is completed.

Guidelines For Implementing Goal No. 6

RECREATIONAL USE OF THE NATIVE RANGE

Situation 1970:

The range and grasslands have a wide variety of potential recreational uses . These diverse uses are as varied as the imagination of the people of Montana and the Nation.

The first and long time uses are hunting and fishing, followed by camping. These are forms of recreation that stem from the pioneer necessity to provide food.

Today people have slowly but steadily shown interest in many other forms of pleasure that can be gained from the grasslands. Examples are hiking, photography, rock hunting, archeology, bird and animal watching and a very recent one, the search for solitude and silence.

Large areas of public land are made available to the general public by the Forest Service and the BLM. Also a large portion is slowly being closed as one rancher after another finds it impossible to operate with the general public traveling by free choice over his lands.

The situation today is an increasing demand for decreasing space. The rangelands are potential areas in which large numbers of our confined urban people may find relief from their crowded conditions. A direct benefit of this would be a more healthy attitude in people, both rural and urban.

The attitude of the average rancher today is still very generous and he allows most people the privilege of free trespass. But, as the price-cost and efficiency squeeze continues, this privilege has a limited life expectancy. The landowner may be forced to turn to recreation incomes to get the maximum return from his holding.

Goal:

By the year 1980, recreation use of the range areas will increase by 500%.

Approach:

The most important factor relative to increased recreational use of the range and/or pasture lands is the condition of the vegetation. Ranges that are in good to excellent condition can withstand a great deal more trampling

from people or vehicles than ranges in a poorer condition. Ranges in poor condition. Ranges in poor condition will deteriorate rapidly under light recreational pressure. Therefore, the basic programs of range improvement are a necessity in gaining increased recreational use.

Range management plans that include recreation as potential development must consider such things as road and trail location. The plan should study the layout of the roads in relation to control of erosion and runoff. Roads must be located so that people will follow them as they travel to the attraction sites.

Well planned access routes not only control erosion, but help in creating compatibility between livestock movement and recreationists.

The importance of planning for multiple use cannot be stressed too much. If the users clash, even on minor points, the chances for maximum development are seriously curbed.

Such things as logical picnic and camping sites must be considered. If areas of mineral outcropping or archeological sites exist, roads and trails should be planned so as to gain easy access with minimum erosion.

Whenever the attractive sites are large enough for and capable of, supporting development such facilities as tables, fireplaces and toilets should be constructed, thus cutting down wear and tear on the land while obtaining optimum use.

A very significant category of changes or improvements that must be confronted to gain maximum use are the legal problems. There is a real necessity to get new or updated laws to cover fire protection, littering, vandalism and public liability. The situation is important enough to require special state-wide committees to study and draw up legislation to solve these most serious points.

Memoranda of understanding between private landowners and public land agencies need to be drawn to gain mutual cooperation in matters of recreation and to facilitate good recreation management over large areas.

Educational programs pointed toward the potential of recreational uses of the grasslands need to be instigated so urban people will realize the enjoyment of grassland based recreation. Landowners need to realize that recreation represents a possible source of income. Also, ranchers need to realize that they have a responsibility to the betterment of the general environment and the general well-being of our country, for they control about 70% of the State land area.

The Financial Impact From a 500% Increase in Recreational Use of the Grasslands

Income from recreation on grasslands will come in many forms, both tangible and intangible.

The most easily realized and assessed will be the income to private land holders who may wish to take advantage of the desires of the public and charge a fee for services, facilities and use of the rangeland for recreational purposes.

Nearby urban areas will be enhanced by more people coming to the community to enjoy the pleasures of the range and pasture lands.

In general, societal values will be improved by having additional recreational areas available for people.

Time Table for Goal No. 6

By 1974 recreation will increase 100% on the grasslands.

1976 increase 200%

1978 increase 300%

1980 increase 500%

ENVIRONMENTAL ENHANCEMENTS

Montana and the nation will receive huge benefits as this rangeland program progresses toward its goals.

This section is a brief list of a few general categories that will greatly enhance the environment.

These benefits are valuable to all of the people.

1. Accelerated or induced soil losses from wind and water erosion on native ranges will be virtually eliminated.
2. Pollution of air or water by grazing lands will be reduced to a minimum.
3. The beauty of Montana will be enhanced greatly by restoring nature's mantle of grass from border to border.
4. There will be increased production of sediment-free water from rangelands for better grass growth, recreation, urban and industrial uses, and stabilized stream flow.
5. The economic situation of Montana will be generally improved by having a more enticing environment. Examples are:
 - (a). Safeguarding water supply for urban development
 - (b). Stabilizing and maintaining the family type ranch
 - (c). A more attractive rural community
 - (d). Scenic beauty

IMPLEMENTATION OF PROGRAM

To accomplish the goals and programs outlined in this plan, the first and most important step is coordination.

No specific enforcement powers have been incorporated in this plan. Because of the wide spread scope of the resource it is most important that we establish and insure general voluntary participation by all persons concerned.

The program will be financed and supervised by the State Soil Conservation Committee. It is contemplated that the SSCC will supply office space for the coordinator and his staff in their offices in the Capitol Complex at Helena. The SSCC will be responsible for providing financing from their budget for wages, travel, office supplies, and miscellaneous expenses for the coordinator. Other sources of funding such as grants-in-aid endowments and gifts will be used as necessary.

The SSCC will be responsible for hiring a qualified coordinator and supervising his activities in carrying out the State Rangeland Resource Program.

Advisory responsibility and guidance will be secured from a 21 member Council. Five members of the council and the chairman will be private land occupiers appointed jointly by the Association of Soil and Water Conservation Districts. They need not be members of either designated organization. The other fifteen members of the Council will be authorized representatives of federal and state agencies and other organizations interested in rangeland management.

The Advisory Council will meet annually, and in special session as often as deemed necessary to fulfill its responsibility.

Members of the Advisory Council will be entitled to per diem, travel and a wage comparable to other Board of State and Federal government board members. Only those who cannot be reimbursed by the organizations they represent will receive payments from SSCC funds.

Duties of the Advisory Council are to review and develop annual and long range work plans, set priorities of work and offer advice and counsel to the State Soil Conservation Committee for carrying out the Rangeland Resource Program within the funds available.

THE COORDINATOR

Since implementation will be possible only by advice, counsel, and coordination, this creates a situation requiring the services of a highly qualified Coordinator.

His qualifications will need to be unique to accomplish the tasks outlined in the plan.

He will have to be well versed in the Science of Range Management, but not necessarily a college graduate in this field. A good basic working knowledge, plus the ability to assemble the expertise, is of much greater importance.

The most stringent requirement of the Coordinator is the ability to communicate between all parties affected, from the practicing rancher, to the Scientist in his laboratory, and all persons in between.

To accomplish this the Coordinator must have as much freedom of action as is possible under normal employer-employee relationships.

His position of unbiased neutrality must be protected by all affected parties if the State is to gain maximum benefits from this program.

Another important qualification is the ability to negotiate agreements between agencies on all levels of government, while maintaining the confidence of everyone concerned.

Many times the Coordinator will find himself in the position of arbitrator. He will definitely have to be able to settle disagreements in a manner that leaves him in a position of continuing a good working relationship with all parties after the problems have been solved.

The Coordinator will need a practical knowledge of the cost of improvement projects to insure the success of recommended programs. Reality is vital to the success of the plan and its programs.

There are already many agencies and institutions staffed with competent, professionally trained personnel to implement this proposal. Thus, it is not the intent of this plan to have this Coordinator supply technical or physical assistance, but to act only in the role of advisor, counselor, and coordinator.

In the field of recreation the Coordinator will strive to bring about understanding and compatibility between recreationists and ranchers. Work must be done to correct weaknesses in fire protection, vandalism, litter and public liability laws and responsibilities.

Examples of the value of recreation potential on good and excellent con-

dition range should be presented to landowners. This will take coordination of existing and new educational programs.

Management plans will be coordinated to minimize conflicts between governmental agencies and private landowners.

The Coordinator will need to participate in zoning studies to insure that native ranges are adequately represented at planning sessions for development of zoning laws.

Perhaps one of the more important duties will be the coordinating of range management research. We are, at present, experiencing a certain amount of duplication in research projects by the various organizations involved.

It certainly will be the responsibility of the Coordinator to bring overlapping and duplication to the attention of the persons concerned, then offer his service to try to assign the work in the essence of efficiency and time.

In this same vein, whenever the Coordinator finds a need for research, he should impart this knowledge to the logical person or place and make all efforts to get the program under way.

These are just a few of many duties. Thus, it will be necessary for the Coordinator and the Advisory Council to select which problems or projects should receive first priority.

It is evident that the success or failure of this range resource program rests heavily on the ability of the Coordinator to perform his duties in an effective and efficient manner.

SPECIFIC PROJECTS

This section has been placed in the program for the benefit of the person who does not come into contact with the rangeland in his daily business.

One of the first orders of business for the Rangeland Resource Program Coordinator and the Advisory Council will be to study the following project list, enlarge it as necessary and set priorities of action that individuals may consider in their own programs.

The items included are a few of the many projects that should be recommended for immediate action:

- A. To provide language to be used by the legal profession when drawing up sale contracts, leases, endowments, etc., that will provide for range management protection to be applied on the lands affected.
- B. Negotiate agreements with loaning groups - both in public and private - whereby principal payments can be deferred while specific range management programs are established on the lands covered by the loans.
- C. Strive to establish at least one pilot Range Renewal District and at least two Range Project Areas in next three years.
- D. Assemble a rangeland inventory, including economic impact, to be completed and presented to the Governor and the Department of Economic Development.
- E. Become active, both financially and personally in the new 4-H range judging contests to get the largest possible participation.

PROGRAM RECOMMENDATION OF A GENERAL NATURE

This section lists proposed projects of long duration. Those listed are just a few of the total. New ones should be added periodically. Several groups and individuals will generally participate jointly in these projects. The Coordinator and Council will periodically review this section for additions and priorities.

- A. All Federal and State organizations should be encouraged to coordinate and unify range survey analysis methods and management techniques so the data can be uniformly interpreted and interchangeable among all agencies.
- B. The concept of optimum development of all compatible uses should be accepted and applied to all public lands.
- C. The optimum development concept should be explained to private range landowners and they should be encouraged to adopt this concept.
- D. Budgets of Federal and State Agencies should be increased to more accurately reflect the importance of their respective responsibilities on grazing lands.
- E. Contract-type cost sharing should be made available for all range-lands in Montana and elsewhere. (Great Plains concept)
- F. Accelerate use of FHA and other Federal loans and grants made to Grazing Associations, Recreational Areas and Urban Industrial Areas. Include stricter provisions regarding management of range areas affected by loans. (This is a good management control device.)
- G. Existing memoranda of understanding should be re-examined by all State and Federal agencies; update and fill in gaps to expedite communications.
- H. The $2\frac{1}{2}\%$ funds from State owned lands will be used to cost share for development and improvement of State lands. Investments made with these $2\frac{1}{2}\%$ funds should be promoted.
- I. More range schools and tours should be promoted (example: Agricultural Lender's School and Rancher's Range School).
- J. A conservation Education Coordinator should be placed in the Department of Education and rangeland resource management be emphasized.
- K. RC&D projects should put more emphasis on Range Management in their programs.

- M. ASCS cost sharing practices should be closely related to management plans, especially in range practices.
- N. Native range fertilization should be given more priority in range research programs.
- O. Practices involving use of insecticides and herbicides will be carefully examined so hazards can be eliminated and progress can be accelerated.
- P. There should be a substantial increase in research on mechanical and biological methods of brush and plant control.

MISCELLANEOUS CONcidental PROJECTS AND PLANS THAT AFFECT THE RANGELAND

Montana is large and so is the number of differing resources and economic endeavors found within its borders.

With 70% of the area in Montana rangeland we find many projects and plans that on the surface, seem to be completely unrelated to the range but they do have an important effect on the proper use and condition of these lands.

This area of concern contains some of the most complex problems we have today. Determining responsibilities for reclaiming disturbed areas is sensitive at best. Only by joint, well thought out action programs participated in by all parties will sensible results occur.

This section, like the two previous ones, contains only a partial list. It is assembled as an example of what should be considered.

One of the high priority activities of the Coordinator will be the creation of a more complete list of these projects and plans and to ascertain just what effect they have on the rangeland or what the rangeland's part will be in these plans.

- A. Mined over area - reclaimed
- B. Urban beautification plans in range settings
- C. Industrial areas - reclaiming and planning
- D. Municipal or industrial water supply
- E. Waste disposal area reclamation
- F. Highway beautification
- G. Rural vists for traveling public
- H. Utility rights-of-way revegetation
- I. Airport maintenance
- J. Revegetation of military sites (firing ranges and impoundment area)
- K. Revegetation of logged areas
- L. Revegetation of exploratory prospect disturbances for minerals, coal, oil.

ECONOMIC IMPACT OF RANGELAND IMPROVEMENT IN MONTANA

A direct impact will be felt in many areas of Montana's economy when the rangeland improvements are accomplished.

The following list includes several large categories where increased income can be expected. Also several areas are listed where substantial savings will be realized.

A part of this section shows the various ways that the income will be produced in several different businesses such as livestock, recreation, and rural communities.

- A. Increased Livestock Numbers
 - 1. Larger gross production
 - (a). Higher lamb and calf crop percentage
 - (b). Heavier weaning weights
- B. Greater Recreational Potential
 - 1. More investment in facilities
 - 2. Increase in job market
 - 3. Larger gross income
 - 4. Higher net profit
- C. Less Erosion Control Costs
 - 1. Water washing or flooding damage to property minimized
 - 2. Wind erosion damage at a minimum
- D. Increased tax income at County, State and Federal levels
- E. Decrease in pollution control costs.
- F. Increased Property Values
 - 1. Ranch land values
 - 2. Business value (scenic backdrop)
 - 3. Increased business volume

Research conducted at experiment stations throughout the western range county has consistently shown the value of proper stocking and high condition ranges. Good range management means high calf and lamb percentages, heavy weaning weights and high net returns to ranchers.

Costs and returns of different levels of range management carried out by ranchers throughout Montana prove that good range management has a tremendous economic impact. The following example of a 5,000-acre range unit illustrates this economic impact. It is merely one of many studies carried out and represents an average of the composite.*

5,000 ACRE RANCH

Animal Units	Fair Range Condition		Good Range Condition
	Overgrazed	Proper Use	Proper Use
	200	100	150
Calf Crop %	75%	88%	90%
Weaning Weights	325#	400#	440#
Winter Feed Period	5	4	3
Gross Income	\$11,245.00	\$ 9,221.00	\$13,851.00
Annual Costs	\$13,164.00	\$ 7,401.00	\$ 8,243.00
Net Return	\$-1,919.00	\$+1,820.00	\$+5,608.00

The difference in net return between poor management in Column 1 and good management in Column 3 is \$7,527. This divided by 5,000 acres shows that management in Column 3 netted \$1.50 more per acre than management in Column 1. The net return in Column 3 was \$3,888 more than in Column 2.

To get an average net return for fair condition range, Column 1 and Column 2 were averaged together. The good condition range netted about \$1.15 more per acre than fair condition range.

Economists state that money coming into an agricultural community will couble through business transactions within the community. This means the economic impact could be \$2.30 per acre for each acre improved from fair to good condition range.

There are approximately 30,000,000 acres of fair to poor condition range in Montana that have a potential of being improved to good or excellent condition.** This 30,000,000 acres multiplied by \$2.30 amounts to a potential increase of nearly \$70,000,000.

The present annual income from tourists and out of State recreationists amounts to about \$125,000,000. Space is needed for more outdoor recreation and much must be provided on private lands. Ranchers' income from this source could be enhanced with improved range conditions and a change in ranch management operations. Ranchers have a golden opportunity to supplement their regular income by taking advantage of recreational opportunities such as paid guide services, pack trips, family ranch vacations, hunting, fishing and camping privileges, etc. These enterprises plus the necessary supporting businesses such as motels, hotels, restaurants, sporting goods stores, etc. would add materially to the annual income of the State.

Simultaneously, an increased tax base will be established. Revenue from income tax will be increased by an impressive amount. Property values

can be expected to increase and stabilize with the improvement of range conditions and development of recreation facilities. Tax revenues from increased livestock numbers resulting from range improvement will be appreciable.

Other benefits will be in the form of savings of money and environmental improvements from reduction of pollution and erosion from the rangelands. There should be lower maintenance costs on city water supply systems, less pollution in streams and lakes and less flood damage. A high quality stabilized water supply will make water development for both urban and rural areas much cheaper and more dependable.

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* In recent years ranchers throughout Montana, with assistance from Soil and Water Conservation Districts, have carried out more than one hundred studies of costs and returns of different intensities of range management records and opinions of over one thousand ranchers.

** Taken from Conservation Needs Inventory records compiled by the U.S. Soil Conservation Service.

STATEMENTS OF SUPPORT TO PLAN

The following statements of endorsement and approval are assembled for background information.

1. Governor's letter
2. ASRM concurrence
3. BLM Director's statement
4. Article by Kenneth Grant

June 19, 1970

Mr. Pete Jackson, Chairman
Development and Steering Committee
State Rangeland and Resource Plan
Harrison, Montana 59735

Dear Pete:

As you know, a number of state agencies have, at my request, examined the State Range Land Resource Plan to determine what they could contribute and what improvements might be made. I have enclosed copies of these statements to provide you with a more detailed idea of the inputs being considered.

Suggestions as to improvement centered on four areas:

- (1) The use of herbicides for bush control should come under broad review by a number of agencies to determine the long-range effects on game, soil, and water.
- (2) The Coordinator's position should be established within an existing agency to reduce expenditures and the proliferation of offices. The name of this agency should be included in the plan.
- (3) More emphasis should be placed on the contribution which can be made by trees and shrubs to the goals outlined in the plan.
- (4) With the increase in rangeland and its use for recreational purposes, the possibility of range fires also increases. More emphasis should be placed on programs to reduce this possibility.

Other suggested improvements are included in the attached letters.

Generally, the goals of the plan are commendable and should, as stated, lead to substantial improvements in the amount and quality of rangeland available to Montana with concomitant economic and recreational benefits.

I wish the program every success.

Sincerely,

/S/

FORREST H. ANDERSON
Governor

Enc.

July 8, 1970

Honorable Forrest H. Anderson
Governor of Montana
Helena, Montana 59601

Dear Governor Anderson:

Mr. Peter V. Jackson of Harrison, Montana has brought to the attention of the American Society of Range Management the proposal to develop a range resource plan for Montana.

The American Society of Range Management encourages careful and thorough planning for the use of the rangeland resources on individual tracts and within Counties, States, and Regions. We commend those persons, groups, agencies, and institutions in Montana for their efforts to develop a co-ordinated range resource plan for their State. We look forward for an opportunity to review the completed plan.

Very truly yours,

/S/

Wm. D. Hurst
President
American Society of
Range Management

cc Mr. Bredemeier
Mr. Colbert
Mr. Cox
Mr. Housley
Mr. Gates
Mr. Wilson
Mr. Jackson
Dr. Leinweber

January 8, 1970

Mr. Pete Jackson, Chairman
Development and Steering Committee
State Rangeland and Resource Plan
Harrison, Montana 58735

Dear Pete:

We found it a pleasant and stimulating task to review the November 1969 draft of the State Rangeland Resource Plan. Montana's rangeland resources unquestionably deserve this emphasis. Furthermore, we are in wholehearted agreement with the degree of emphasis placed on livestock grazing as a solution to rangeland problems when skillfully managed.

The plan accurately describes the beneficial impact grazing management systems have on rangeland vegetation; not only for the benefit of livestock, but also for watershed, water pollution, wildlife, recreation, and general environmental quality. In the past, these benefits have not been given the emphasis they deserve. Because of this tendency, the livestock industry has not received due credit as a potential benefactor to rangelands. Other interest groups highlight the abusive influence of continuous livestock grazing, while overlooking the beneficial influence of grazing systems. As a result, the public tends to view any effort to intensify grazing management as self-serving to the livestock industry rather than as it is--beneficial to all mankind.

As background for a few specific comments, we should provide details which show the extent of our role in native rangeland management as envisioned in your plan. There are 8.2 million acres of public land in Montana. We have an inventory of these lands which is updated annually. Of these 8.2 million acres, we intend to have a direct input into the development of grazing management plans on 6.5 million acres. Included in the 6.5 million acres are 1,130 grazing allotments which involve 1,410 ranchers. Our experience has been that the ranchers desire to include privately owned and leased intermingled lands in Allotment Management Plans at a state-wide rate of approximately 2 acres of private land to every 3 acres of public land. At this rate, an additional 4.3 million acres of privately owned and leased lands would be included with the 6.5 million acres for a total of 10.8 million acres receiving our direct input.

The balance of the 8.2 million acres public land (1.7 million acres) are of such a nature that it is doubtful if they will receive priority consideration for grazing management for decades, if ever, under present BIM outlooks. On these lands, we encourage the ranchers and other agencies to take the lead in planning and development with minimal input on our part.

The plan proposes demonstration areas at strategic locations. We should be able to contribute significantly to this. We now have Allotment Management Plan agreements on 137 grazing allotments in Montana which embrace 1,092,000 acres of public land. We have an additional 6 agreements just over the state line in the Dakotas which embrace 58,000 acres. These plans are well scat-

tered throughout the state. You should be familiar with a few of them in the Dillon District. All the plans include a grazing management system. These systems have been designed to benefit to varying degrees, all the values which are described in your plan. A large portion of these grazing systems have been implemented. The plans are strictly voluntary on the part of ranchers. None have been forced, nor do we intend to do so. To force a plan would be self-defeating. This policy has been no problem, since a large number of ranchers have expressed the interest to develop plans with us. So, if a rancher has doubts, we have a fertile field to work with while allowing him time to resolve his problems or satisfy his questions. Some of these plans have been in operation as long as five years. Most are producing an encouraging degree of benefits to all values. Many are so situated as to offer fine opportunity to demonstrate results of native rangeland management. You are welcome to use them for this purpose.

The plan discussed the need for a resource inventory. We agree, particularly as you have expressed the need to inventory all native rangeland values. As far as stocking rates are concerned, we find we already have adequate information. All the 10.8 million acres referred to have a carrying capacity inventory using either the Ecological Site or the Occular Reconnaissance methods. We use this information along with horseback estimates of the percentage forage harvested by the livestock. Starting with that, we develop a grazing system and then continue to work with the ranchers to adjust as experience shows the need. This has proven effective and precludes the need for further carrying capacity surveys.

In several places you have touched on the benefit of skillful grazing management on sediment reduction. It should be worth your while to pursue this topic in more depth. Our on-the-ground experience is demonstrating that grazing management has a profound effect on reducing sedimentation, and at a rate that exceeds our most optimistic estimates. The public is becoming extremely sensitive to environmental quality and water pollution in particular. Also, it is well accepted that sediment is a significant water pollutant. However, we find that the public places little credence in the contention that grazing systems have any significant influence on reducing sedimentation.

Our experience shows that your predictions for benefiting livestock production are entirely reasonable. You touched on realizing benefits through the means of increasing stocking rates, conception rates, and weaning weights. An additional means would be worth mentioning. We are learning techniques to design the grazing systems to help shorten the conception period. As you well know, when a rancher succeeds in shortening his conception period so that he is dropping most of his calves within 45 days or so, he has a more saleable package with older and more uniform age grouping, as well as more pounds of beef.

Your discussions which urge the identification and coordination of research needs are well taken. In addition to what you have mentioned, we find more research information is needed on: (1) soil compaction effects related to concentrating animals in a smaller portion of area during parts of the year, (2) plant growth rates associated with previous timing and intensity of grazing, (3) the recovery time (or needed period of rest) in terms of soil compaction,

stands density and herbage production after close grazing for a number of years, (4) the relationship of specific grazing programs on organic reserve levels and plant vigor, (5) nutrient content of the herbage and animal response to various management programs.

We note you have developed specific timetables for your goals where appropriate. We wholeheartedly agree with the desirability of accomplishing the goals at the rates specified. Unfortunately however, they appear to be overly optimistic for the public lands in view of current outlooks for appropriations. As of June 30, 1969, we had completed 17 percent of our total Allotment Management Planning job. Our Washington Office has furnished us with a Program Outlook Guide which reflects the Director's estimate of the future program situation and indicates his outlook and goals for the next five years. The outlook for obtaining each goal by FY 1975 is rated poor, fair or good. The five year goal for Allotment Management Plans is to implement and maintain 25 percent of the total job in each state. The outlook for this goal is rated fair. The five year goal for range improvements is to accomplish the water developments and fencing necessary to meet the needs of all completed Allotment Management Plans. The outlook for this goal is also rated fair. It would probably be advisable to reconsider your public land time tables in view of these outlooks.

We are enthusiastic over your State Rangeland Resource Plan. If successful in any degree, we view it as a significant step forward for Montana's rangelands. In every sense of the word, they warrant this degree of attention. The fact that the plan relies heavily on local involvement and initiative is its greatest asset.

In recent years we have acquired considerable knowledge and experience in native rangeland management. From this standpoint we should be able to contribute significantly. We would be more than willing to serve on both the Steering Committee and Working Committee to facilitate our contribution. You have our commitment for wholehearted cooperation and wish for complete success in this worthwhile endeavor.

Sincerely yours,

/S/

Edwin Zaidlicz
State Director
Bureau of Land Management

From the Administrator...SCS

ECOLOGY AND ECONOMICS

It is an interesting fact that two common words - ecology and economics - representing two major areas of concern to modern society were derived from the same origin. Oikos is a Greek word meaning household. Ecology literally means the study of the household. Economy literally means the state of the household.

Ecology has developed rather recently as the science that deals with the relations of living things to each other and to their environment. Economics is defined by Webster as the science that deals with the production, distribution, and consumption of wealth.

Our privately owned grazing resources cover more than 625 million acres. "That ain't hay" - hayland occupies another 78 million acres. Managing this major segment of our environment for the good of man requires the careful application of both ecological and economic principles.

The branches of applied ecology known as range management and agronomy plus economics are vital functions in the conservation and development of grazing lands. They are important elements in the technical competence of the Soil Conservation Service.

Grazing lands are complex in their combination, animals, and the needs of people. They vary from complicated native plant communities on some rangelands to improved pastures consisting of stands of only one kind of plant. Each co-operator needs and uses a combination of the kinds of grazing land he can improve or develop with his own resources to meet his yearly needs. Properly developed and managed grazing lands are important for livestock forage, wildlife habitat, watershed management, and wide open spaces for pure enjoyment.

Last summer I made a six day trip to study our assistance to cooperators on grazing lands. We reviewed the procedures for working with farmers and ranchers on grassland management. We visited with cooperators and observed the conservation programs they had applied. All were enthusiastic about the economic benefits of their conservation efforts.

Where ranchers had practiced proper grazing use and used planned grazing systems, plant cover showed noticeable improvement. Erosion and soil losses were reduced. We saw examples of healing gullies and reduced sheet erosion, even near ponds and wells where livestock concentrate.

cooperators told me that technical assistance in grassland and livestock management practices was essential to them. They have found that without sound grazing management, practices such as brush control, seeding stockwater developments, and fencing often are of marginal value.

The benefits to important wildlife species from conservation work were striking. We saw many deer, turkey, quail, and doves on the conservation ranches. Many cooperators are realizing substantial economic returns from wildlife.

I was most impressed of all by the obvious understanding ranchers had of range conservation principles when they had been properly assisted by our conservationists. This understanding was evident both in their comments and in the improvement of their rangeland. Unless we develop such understanding with cooperators, needed land treatment and management is not accomplished.

It is our responsibility to be competent in the physical, biological, and economic sciences and technologies applicable to grazing land so that we can assist cooperators to develop and manage them properly and profitably.

We can say that our objective is to encourage the management of grazing land resources for a satisfactory level of production and income in the short run while improving resources or protecting future options for their use in the long run.

The articles in this magazine together with our annual report of conservation accomplishments illustrate the application of these principles by district cooperators with SCS assistance.

/S/

Kenneth E. Grant

OVERVIEW

The Montana Range Resource Program is put together with the many existing conflicting situations and traditions of time in mind.

Any program that affects such a large industry as agriculture in Montana requires the backing and general approval of the primary people affected. These are the land occupier or rancher.

To get this backing, it is necessary to strictly adhere to the basic fundamental concept under which our nation and State were created.

This fundamental concept is freedom for an individual to work and live in his own way and to provide a living for his family, so long as he does not encroach on the freedoms of others. With this freedom goes the responsibility, as citizens, to protect the natural resources of this land so all people, now and in the future, will have the same privileges to live and work in the free manner we enjoy today.

Those responsible for safeguarding the land are entitled to technical assistance, advice and guidance in management and use of the resource.

With this in mind, this plan is based on counsel and advice. If people are properly informed, management planning can be coordinated and duplication minimized. Then proper range management on native ranges will become a reality without the need for many more rules and regulations than are in effect today.

Necessarily, some rules and laws such as zoning and pollution laws, will be changed in the future. However, if a major portion of the recommendations of this plan are accomplished, then the number of new regulations can be held to a minimum.

To gain maximum progress in the most rapid manner, the following steps are set forth:

First, because coordination is a key to progress, the position of State Range Resource Program Coordinator should be established.

The important fact is the strict adherence to this basic precept that the position be one of advice, counsel, and coordination.

The strength of the Coordinator will rest in his abilities to work with people and agencies, to gain memoranda of cooperation from concerned organizations and inform people of the value and importance of range management and plans or projects to achieve good management.

Second, prepare a resource inventory of the native rangelands and their needs and priority for management and treatment.

Third, ten year goals of accomplishment have been established. Each goal has been considered separately and its situation analyzed. Suggested implementation, including time schedules and financial impact, are included.

Fourth, the plan contains a general outline of methods that can be used to reach our goals.

Fifth, a financial impact section is included to justify the need for a plan and also give basis for future monetary requests when and as they become necessary.

Sixth, there are lists of specific and general recommendations that will help to get the plan in operation in an orderly manner. Also included are projects and plans of specific nature needing immediate attention.

These lists represent only a small portion of the work load but it does give a place to start.

Seventh, the broad scope of management of native ranges involves many fields which may appear, on the surface, to have no connection, but in reality are directly affected. Examples are urban sprawl and strip mined lands and their reclamation. A section of the plan is devoted to this wide variety of problems.

Eighth, encourage agencies and institutions to more closely coordinate their programs.

Ninth, to foster a comprehensive education program to inform the people.

With proper implementation of the State Range Resource Program the entire scope of renewable natural resources will be improved, for our renewable natural resources are, without doubt, the greatest source of wealth we have at hand today.

This source of wealth is probably the easiest to come by of any we have in Montana. Here we can get economic improvement without large inputs of capital investment, importing large numbers of workers (with all their problems) and infringing on already established industries.

The opportunity is here, the need is great, the goals are high. The challenge can be met through the properly coordinate, sincere efforts of all who will benefit from this important program.

A P P E N D I X N O . 1

BASIC DATA

FOR

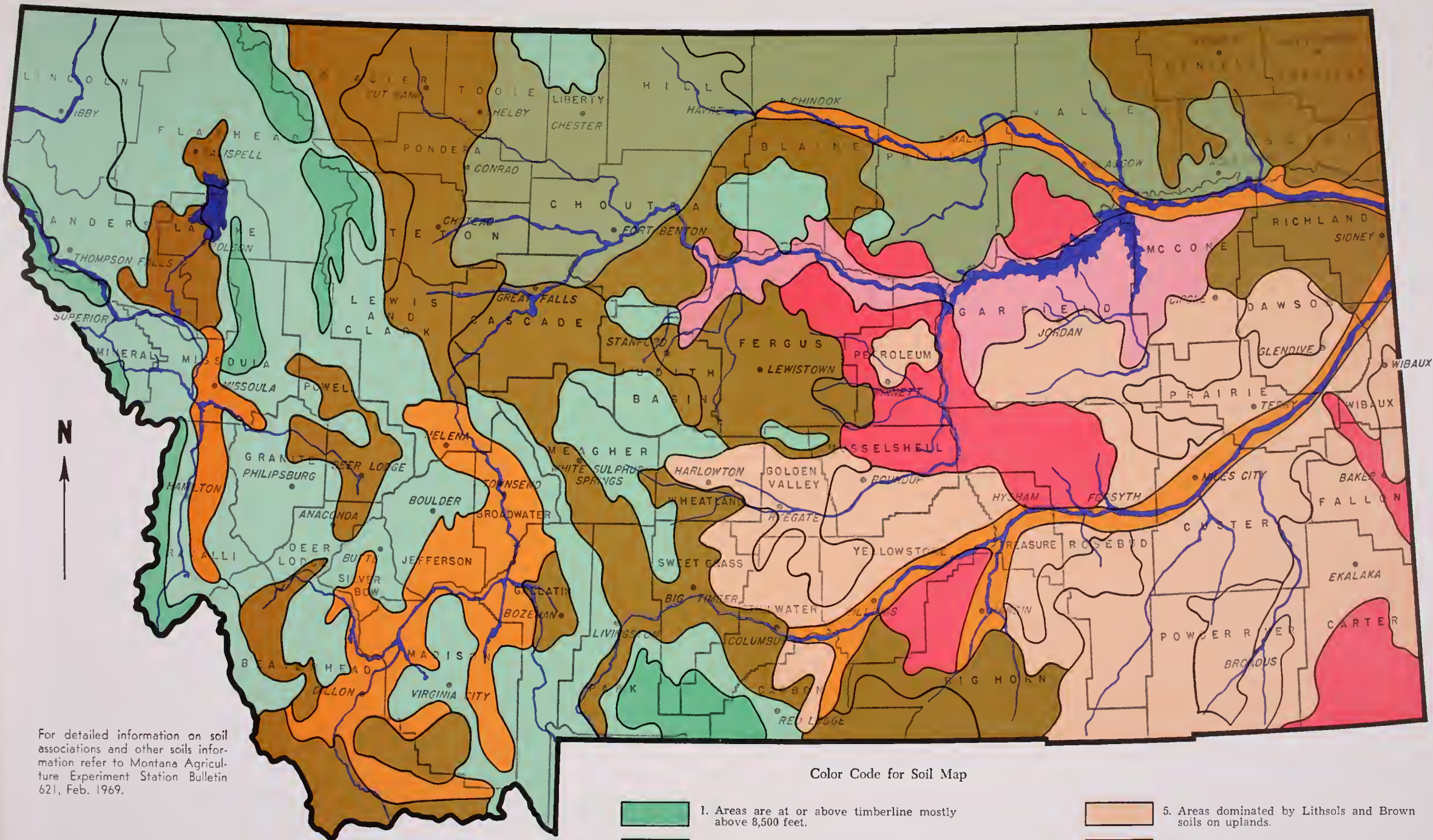
SUPPORT OF RANGELAND PROGRAMS

BASIC DATA TO SUPPORT RANGELAND PROGRAM

The science of Range Management requires a vast amount of information to be used by range scientists in research, education and the application of their work with the resources.

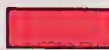
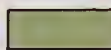
Appendix No. 1 contains the following materials which are included to indicate the variety of facts required in broad area planning of our rangelands.

- A. State Soil Survey Map (general)
- B. Land Use Map
- C. Rainfall Data Map
- D. Range Condition Map
- E. Geographic Map of Montana

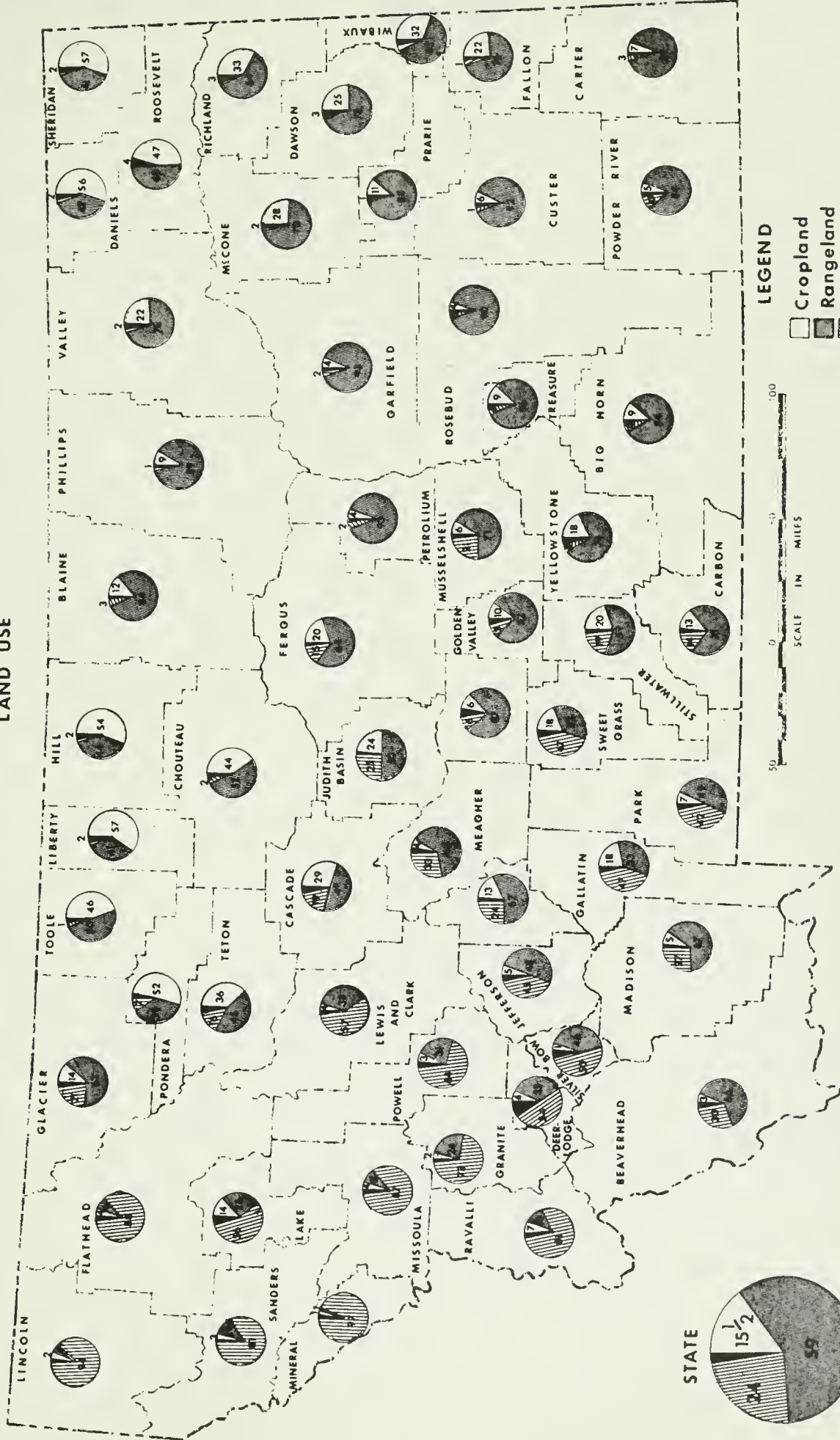


For detailed information on soil associations and other soils information refer to Montana Agriculture Experiment Station Bulletin 621, Feb. 1969.

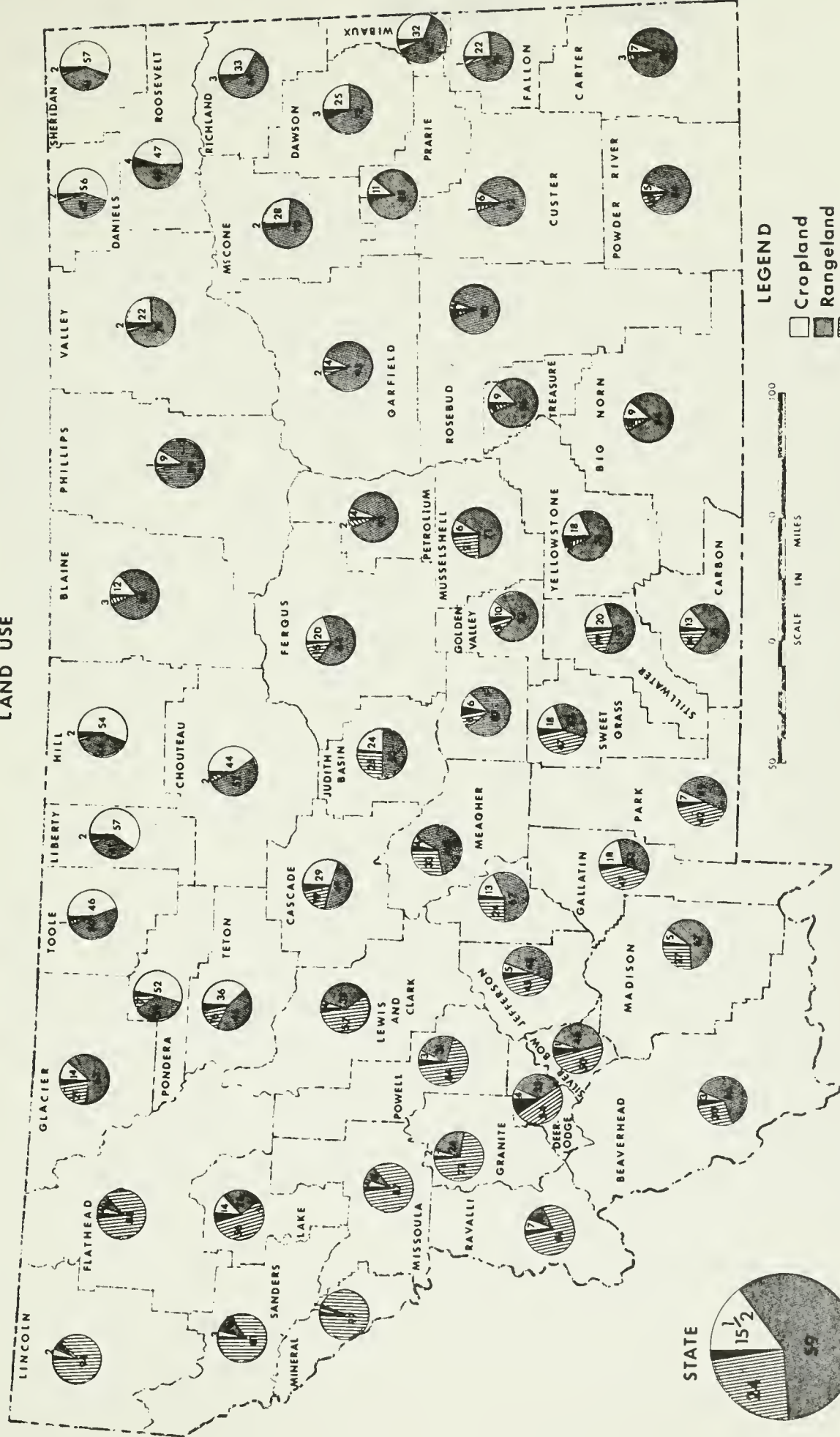
Color Code for Soil Map

- | | | | |
|---|---|---|--|
|  | 1. Areas are at or above timberline mostly above 8,500 feet. |  | 5. Areas dominated by Lithsols and Brown soils on uplands. |
|  | 2. Areas dominated by Gray Wooded and "Brown Podzolic" soils on forested mountain slopes. |  | 6. Areas dominated by Alluvial Soils. |
|  | 3. Areas dominated by rough gullied land. |  | 7. Areas dominated by Chestnut and Chernozem soils. |
|  | 4. Areas dominated by fine-textured shallow to moderately deep soils over shale. |  | 8. Areas dominated by Brown and Solonchaks soils of the northern till plain. |

LAND USE



LAND USE



S. DE

1

4.4°

1

C A N A D A



LEGEND

- State Boundary
- County Boundary
- ★ Helena State Capital
- Phillipsburg County Seat (small town)
- Alton Town Less Than 5,000 Population
- Bozeman Town 5,000 to 25,000 Population
- Missoula Town Over 25,000 Population
- Towns of less than 5,000 omitted from map unless incorporated or required for orientation purposes
- Lake or Reservoir
- and/or Ditch
- Large Stream
- Small Stream
- Water Spreading
- Interstate Highway
- Federal Highway
- State Highway

LEGEND
AVERAGE ANNUAL PRECIPITATION

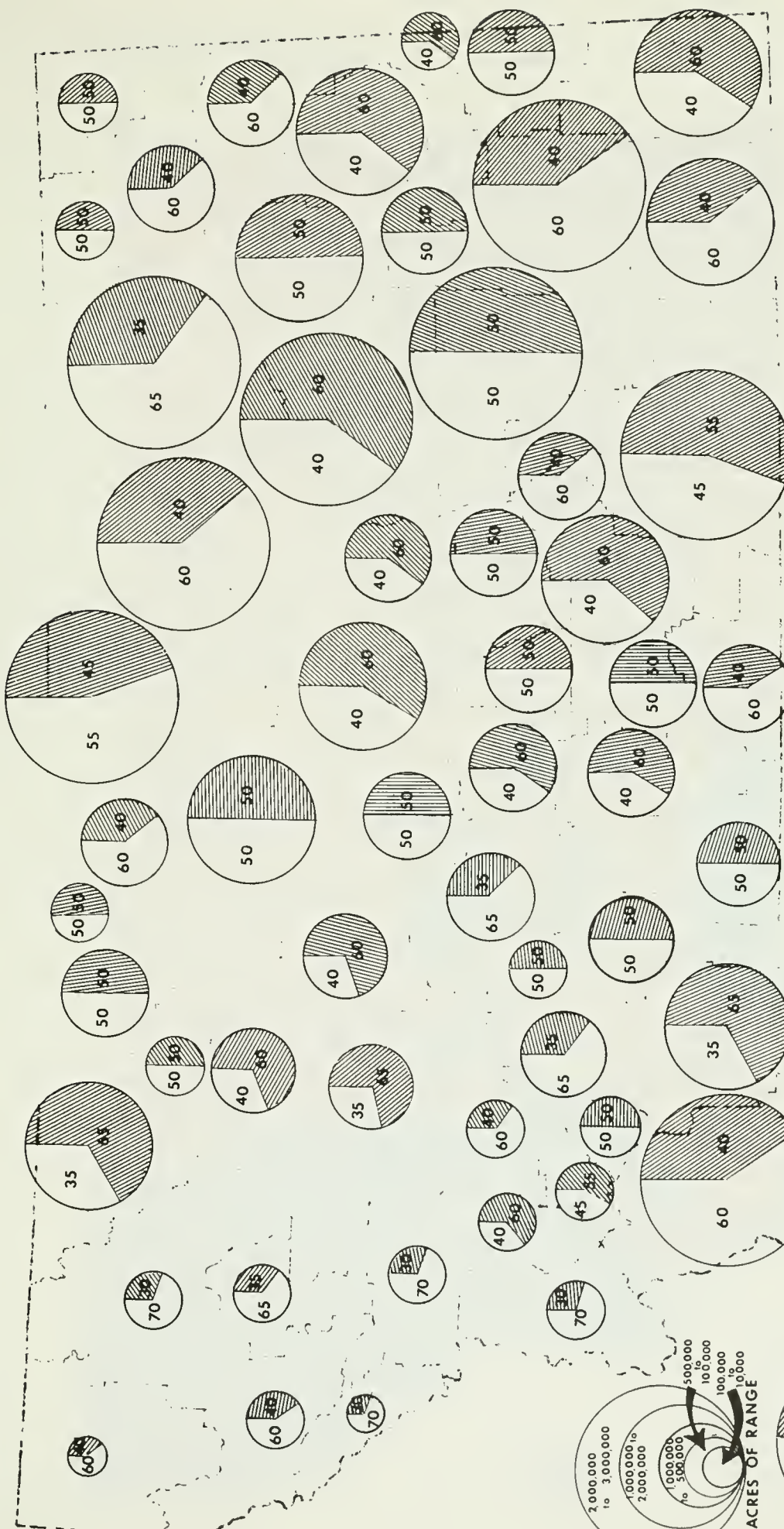
- Less Than 10 Inches
- 10 to 14 Inches
- 14 to 20 Inches
- 20 to 30 Inches
- More Than 30 Inches

* Based on 1953-67 period and obtained from SCS Snow Survey, Soil Survey and Weather Bureau data

AVERAGE ANNUAL PRECIPITATION ZONES*
MONTANA

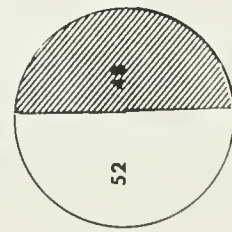
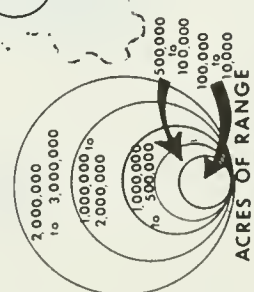
NOVEMBER 1970

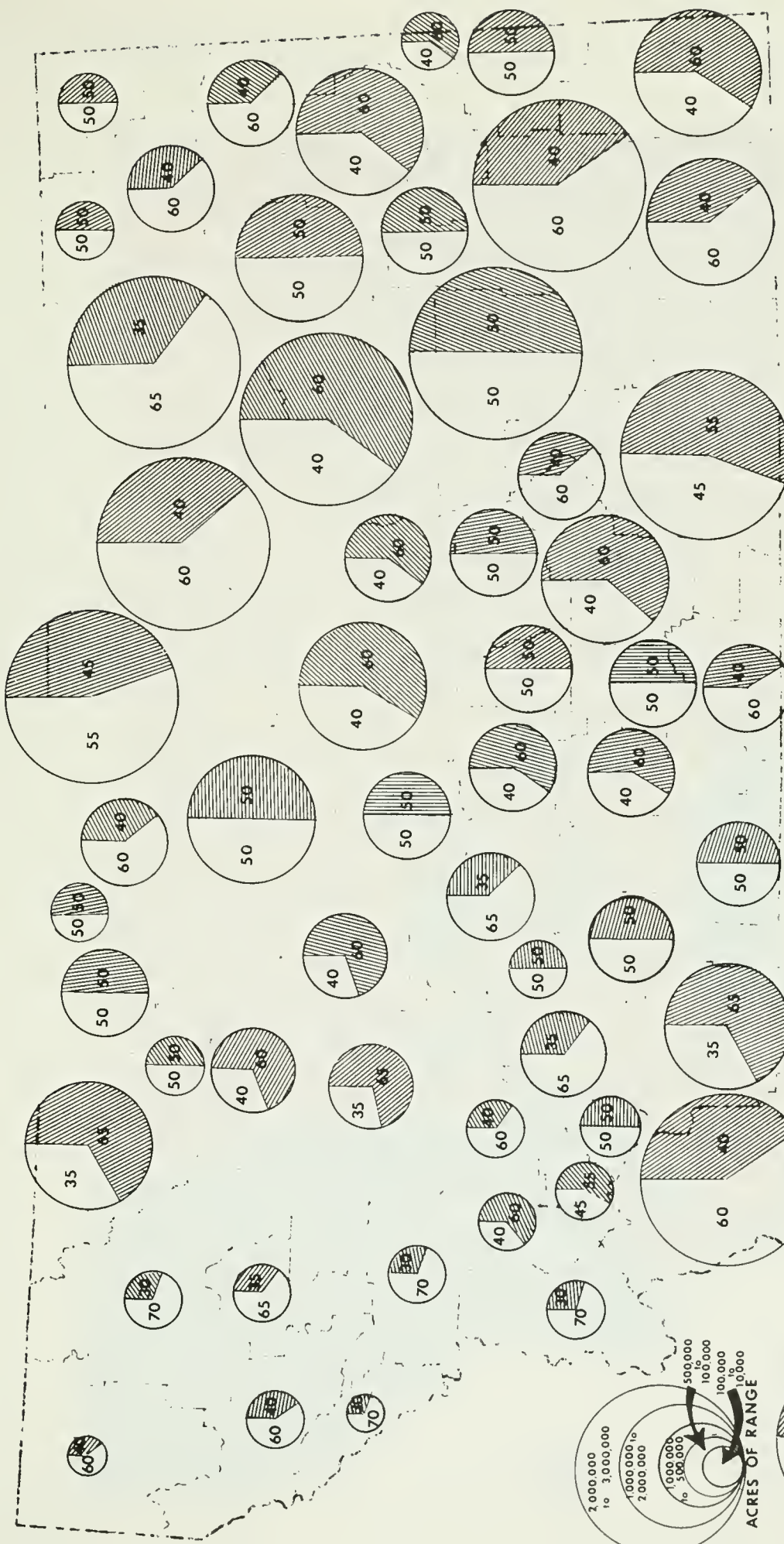
1:500,000 Scale Projection



(Hatched) GOOD TO EXCELLENT CONDITION
 (White) LESS THAN GOOD CONDITION

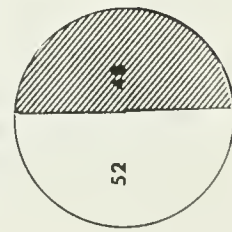
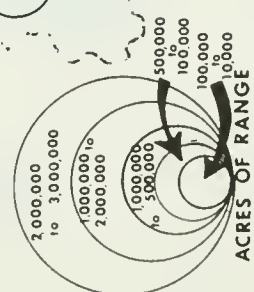
STATE RANGE
 RESOURCE
 59% OF LAND

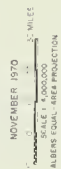




 GOOD TO EXCELLENT CONDITION
 LESS THAN GOOD CONDITION

STATE RANGE
 RESOURCE
 59% OF LAND





4/11/68

R A N G E R E S O U R C E

Sheet 1 of 3

COUNTY	NUMBER OF OPERATORS	TOTAL LAND AREA INCL. PUBLIC	RANGE AND PASTURE INC. PUB.	PRIVATE RANGE	PRIVATE TAME PASTURE	PRIVATE GRAZED WOODLAND
AREA I						
Judith Basin	363	1,203,300	610,990	551,084	22,250	6,738
Fergus	973	2,716,160	1,749,032	1,384,969	58,000	161,844
Petroleum	109	1,056,000	977,832	615,557	10,765	21,381
Garfield	273	2,940,160	2,710,689	2,019,602	40,000	41,381
SUB TOTAL	1,718	7,916,160	6,048,543	4,571,212	131,015	231,493
Phillips	507	3,345,920	2,984,722	1,670,426	68,000	33,411
Valley	900	3,175,040	2,420,140	1,278,887	30,000	24,848
Daniels	491	923,520	384,427	352,896	4,500	
Roosevelt	714	1,526,400	751,735	722,902	20,090	8,745
Sheridan	720	1,087,907	440,017	386,081	32,500	641
SUB TOTAL	2,825	6,712,867	3,996,319	2,740,766	87,090	34,234
TOTAL FOR AREA I	5,051	17,974,947	13,029,584	8,982,404	286,105	299,168
AREA II						
Custer	429	2,409,600	2,229,408	1,857,135	27,600	56,500
Carter	297	2,120,320	1,891,193	1,292,279	32,500	25,756
Fallon	332	1,045,120	790,242	651,175	20,000	760
Powder River	237	2,102,400	1,757,320	1,218,201	30,000	56,000
Prairie	216	1,105,280	969,610	510,041	15,000	1,785
SUB TOTAL	1,511	8,782,720	7,637,773	5,528,831	125,100	140,801
Dawson	634	1,509,120	1,084,908	975,967	19,675	8,435
McCone	685	1,660,160	1,165,825	839,223	56,003	4,456
Richland	766	1,321,600	838,611	716,829	37,000	14,223
Wibaux	219	568,960	369,414	345,423	13,500	5,000
SUB TOTAL	2,304	5,059,840	3,458,768	2,877,442	126,178	32,114
TOTAL FOR AREA II	3,815	13,842,560	11,096,541	8,406,273	251,278	172,915

4/11/68

R A N G E R E S O U R C E

Sheet 2 of 3

COUNTY	NUMBER OF OPERATORS	TOTAL LAND AREA INCL. PUBLIC	RANGE AND PASTURE INC. PUB.	PRIVATE RANGE LAND	PRIVATE TAME PASTURE	PRIVATE GRAZED WOODLAND
AREA III						
Cascade	833	1,701,760	935,764	828,154	10,329	99,610
Chouteau	923	2,508,800	1,303,242	1,154,266	31,529	24,359
Pondera	610	1,051,520	413,756	310,728	15,630	28,669
Teton	850	1,468,160	663,734	523,789	44,135	26,648
SUB TOTAL	3,216	6,730,240	3,316,496	2,816,937	101,623	179,286
Blaine	683	2,730,880	2,281,580	1,756,707	27,000	28,106
Glacier	504	1,903,360	1,209,735	992,210	14,124	67,908
Hill	760	1,872,640	817,511	657,576	59,590	22,107
Liberty	291	920,960	372,687	626,036	12,381	9,518
Toole	452	1,248,000	619,118	506,462	6,728	6,768
SUB TOTAL	2,690	8,675,840	5,300,631	4,355,928	119,823	134,407
TOTAL FOR AREA III	5,906	15,406,080	8,617,127	7,355,928	221,446	313,693
AREA IV						
Big Horn	590	3,217,626	2,269,560	2,501,257	42,430	265,376
Carbon	749	1,324,800	936,611	539,074	19,704	42,594
Yellowstone	1,281	1,686,400	1,258,513	1,101,889	71,000	78,501
SUB TOTAL	2,620	6,228,826	4,464,684	4,142,220	133,134	386,471
Rosebud	399	3,220,480	2,917,778	2,483,906	27,388	213,699
Treasure	120	620,760	539,542	523,389	8,127	38,603
SUB TOTAL	519	3,850,240	3,457,320	3,007,195	35,515	252,302
Golden Valley	123	753,920	633,557	595,880	21,000	20,813
Musselshell	162	1,207,040	866,959	733,882	24,505	237,775
Stillwater	480	1,150,080	677,042	610,785	14,681	56,472
Sweetgrass	300	1,181,440	795,605	640,970	41,899	73,272
Wheatland	165	910,080	794,531	716,586	29,873	9,607
SUB TOTAL	1,230	5,202,560	3,767,694	3,298,103	131,958	397,939
TOTAL FOR AREA IV	4,369	15,281,626	11,689,698	10,447,518	300,607	1036,712

4/11/68

R A N G E R E S O U R C E

Sheet 3 of 3

COUNTY	NUMBER OF OPERATORS	TOTAL LAND AREA INCL. PUBLIC	RANGE AND PASTURE INC. PUB.	PRIVATE RANGE	PRIVATE TAME PASTURE	PRIVATE GRAZED WOODLAND
AREA V						
Deer Lodge	75	472,320	166,178	146,860	8,293	53,562
Flathead	996	3,289,600	189,774	49,820	22,354	157,174
Granite	154	1,109,120	261,326	182,634	11,642	110,657
Lake	1,216	960,000	252,854	180,472	80,891	211,610
Lincoln	550	2,377,600	54,724	33,409	13,213	296,221
Mineral	60	782,720	7,670	688	1,073	57,720
Missoula	415	1,672,320	124,018	74,079	14,000	355,636
Powell	212	1,495,680	467,317	361,697	26,012	236,724
Ravalli	1,116	1,525,760	155,435	95,333	64,500	94,840
Sanders	447	1,791,360	237,800	250,948	30,516	332,975
TOTAL FOR AREA V	5,241	15,476,480	1,917,096	1,375,940	272,494	1,907,119
AREA VI						
Broadwater	208	766,720	475,483	330,881	25,307	25,421
Gallatin	881	1,610,880	527,728	342,521	94,268	117,500
Lewis & Clark	335	2,218,240	831,898	739,290	12,500	168,900
Meagher	145	1,506,560	936,358	783,619	10,000	123,100
Park	425	1,681,280	825,338	457,329	35,000	61,000
SUB TOTAL	1,994	7,783,680	3,596,805	2,653,640	177,075	495,921
Beaverhead	208	3,549,870	2,359,916	1,121,187	60,000	42,690
Jefferson	214	1,056,640	511,622	317,223	21,870	51,623
Madison	460	2,259,200	1,521,733	825,875	90,000	97,279
Silver Bow	137	458,240	214,653	147,371	2,000	28,000
SUB TOTAL	1,019	7,323,950	4,607,924	2,411,656	173,870	219,592
TOTAL FOR AREA VI	3,013	15,107,630	8,204,729	5,065,296	350,945	715,513

VALUE OF SHRUBS AND TREES ON RANGELAND

Shrubs and trees are an integral part of the range resource. Where they do not exist naturally, operators should consider the value of establishing them. Woody materials (1) provide shade and protection for livestock; (2) provide food and cover for wildlife; (3) enhance the beauty of the area; (4) are an essential part of most recreation areas; (5) provide additional erosion control with resulting reduction of silt pollution of streams, and; (6) many species provide needed winter food for livestock and wildlife.

PERSONS AND GROUPS WHO HAVE RESPONSIBILITIES

IN RANGELAND MANAGEMENT

The private landholder represents the largest single category having responsibilities in rangeland management.

This group owns 65% of the land area of Montana and these lands produce 89% of the forage for domestic livestock plus a large share of the forage for wild game.

Private landholders are grouped into several subcategories based on their particular professions and locations.

Those in the operator-owner category work, live on, and manage their lands directly. This usually results in good range condition because the land can be improved easiest in the shortest period of time by these individuals.

In the absentee owners' category are those who hold title to the land and are legally responsible for its condition. However, they operate their holdings by the use of many types of agreements with renters. Generally, absentee owners are proud of their lands but many times distance tends to obscure their vision in seeing problems as they occur.

In the renter and sharecropper category are those whose primary concern is the cash crops from the land. This tends to direct their interest in the land from development and protection to production because their occupancy is temporary and they are basically interested in cash income. This condition does not create, generally, the needed interest for excellent range condition that is necessary for the highest quality management.

Corporate holdings in Montana are an important category of our landowners.

These large corporations, in the past, often acquired their land for reasons other than forage production. Usually the acquisition was for possible mining, timber or industrial areas.

To these people the cash return from grazing is minor in comparison to the basic incomes of the organizations. On the other hand, corporations that have been well informed regarding the importance of range condition and management have completed some of the most outstanding examples of range development that have been accomplished to date.

Grazing Associations financed by the Farm and Home Administration are relatively new as landholders. They are groups of ranchers who have organized themselves and formed an association to purchase large areas of grazing lands. These associations have incorporated into their bylaws provisions that good range management is to be practiced at all times. This type arrangement is an example of the recognition of the importance of good management and the

results of their efforts are showing up on nearly every unit.

Project areas of Soil and Water Conservation Districts are areas that can be established to carry out specific resource management and improvement proposals. Range renewal projects could be implemented through a project area approach.

Indian Reservations own very large areas of the rangelands in Montana. They have a major responsibility for getting improved management on the grasslands. Tribal Councils and other organizations are working hard to get range improvement through proper management started and accepted on these lands. There is a good potential for increased production as these plans progress and educational programs are initiated.

Railroad lands are a particular category of landholding in Montana. Basically these lands were given to the railroads to enhance their development and to assist in financing the original construction of the rail lines. The railroad companies are endeavoring, through trained range specialists, to get proper management on these tracts, but the landlord-tenant arrangement gives them an absentee status that makes it difficult to gain rapid results.

STATE OF MONTANA

Several departments and bureaus of state government have responsibilities for grazing lands. The following have been selected for discussion since they have lands under direct management.

The largest state land manager is the Department of State Lands and Investments. This Department is responsible for the School Trust Lands and other smaller areas.

These lands are generally rented out on long-term leases to individual operators. These renters have applied all degrees of management. As a result, range condition varies from poor to excellent. The Land Department is moving rapidly into management planning with some development. In the future good results can be expected to appear on those tracts given concentrated assistance.

The State Grass Commission jointly manages large tracts of State, Federal and privately owned lands contained in several State Grazing districts. This management is cooperative in nature in some cases while direct management is applied in the more active districts.

Grazing Districts are real pioneers in the management of grasslands and have made good progress over the years. Their position is one of extreme importance in the improvement of Montana rangelands.

The Department of Fish and Game have been steadily acquiring tracts of land that are important to both recreation and game management. These tracts are usually well managed and can be expected to improve in condition in the future. Population pressure on some of the area which are used to gain access to streams and picnic sites will make it difficult to maintain a good condition range. Only special care can accomplish this task.

Soil and Water Conservation Districts have a two-fold responsibility. The first is a direct responsibility to properly manage any grasslands that may be owned by the districts. Whenever a district acquires land, proper management is applied not only for the benefits derived but also so the area can be used for demonstrational and educational purposes. The second responsibility to properly manage, protect, and utilize the soil, water and vegetative resources of the State.

Responsibilities of the Department of State Forests include both timber and grazing management. Their lands are generally in the form of grazable timber lands. Grazing management is usually secondary to timber management, however, grazing management is being applied to these areas and good results are evident. With improvement of condition on the rangelands over the entire state the State Forester's responsibility for fire protection becomes critical. Good to excellent condition ranges, with an abundance of vegetative growth, creates a fire hazard.

The State Experiment Stations have areas of rangelands that are used to carry out research projects. In the process of conducting research, some lands may decrease in condition. This is necessary to gain knowledge which will be beneficial to the total range management program. Generally the lands of the experimental station are well managed and in an improving condition.

Some University lands are classed as rangelands. These are usually well managed and planned and are either in good or improving condition.

Institutional lands of the State are now mostly well planned and in an improving condition. A good example is the prison ranch where excellent planning has been developed, and the vast acreage of rangeland is in good to excellent condition.

It is a responsibility of the State Agencies to plan proper range use and practice above average management on their lands.

THE FEDERAL AGENCIES

Various federal agencies control approximately 30% of the land area in Montana. Thus these agencies have a large responsibility to the rangelands that they administer and an equal obligation to the grazing lands that are affected by the various agency's decisions and plans.

The Forest Service administers the largest area of federal lands in the state. They make up 13% of the land. Most of the National Forest lands are in half of the state.

Much of the National Forest land is suitable for grazing. It supplies summer forage for many ranchers, plus habitat and forage for about one-third of the wild game. Water production and recreation are primary responsibilities of these lands. The vegetative condition is generally good and planning activity can be developed between private lands and the National Forests.

The Bureau of Land Management is the designated agency to manage Taylor grazing and other similar type of federal lands. The Bureau has a highly responsive role in the management of the grazing lands. Their scattered and fragmented land pattern makes management difficult. These lands are often quite fragile and easily damaged by grazing and other disturbances, thus adding to the difficulties of land management. In most cases the management plans developed are directly affected by intermingled private lands. Also, any programs put in action have a like effect on private and state lands.

The Bureau of Indian Affairs own and manage approximately 125,000 acres. Primarily their responsibility is one of advice and guidance to the Reservations. The BIA has an indirect responsibility for large areas of tribal owned rangeland on the different reservations.

The National Park Service has over a million acres of grazing land in Montana. These lands are intensively managed, but, due to the pressure of people and their demands, they are hard pressed to keep these ranges in an improved condition. Game management controls and travel patterns are high priority items in National Parks.

The Bureau of Reclamation has about 162,000 acres of rangeland included in their projects. The Bureau is responsible for seeing that these rangelands are properly cared for and good management planning is applied.

The Bureau of Sport Fisheries and Wildlife have over one million acres of grazing lands in their reserves. These lands are managed and planned for improvement of the vegetative cover for watershed protection and food and habitat for wildlife. In many instances they also provide summer forage for ranchers' livestock. The rangeland administered by this Bureau does have some pressure from people which makes management somewhat more difficult than the average tract of private land.

The Agricultural Research Service plays a double role in research and land management. The ARS is responsible for managing its own particular rangelands in the best and most scientific manner. This is being done and their lands are in an improving condition.

In addition ARS is responsible for carrying on research on rangelands to help solve some of the many vexing problems confronting land managers and owner-operators.

The Army Corp of Engineers are not primarily grazing land managers by title or charge. However they control more than one-half million acres in Montana and many of these tracts are rangeland. Planning and management of these areas is receiving adequate attention at the present time.

TECHNICAL ASSISTANCE

Technical assistance, particularly to the private landowner and/or operator, is vital to the management and improvement of Montana's land resources.

This assistance is also vitally needed by the many land management agencies so they may gain maximum results from their various programs.

The Soil Conservation Service is prepared to assist ranchers in developing and carrying out management plans that are based on the conservation needs of the individual ranch operation. The services are available upon request. The SCS, through Soil and Water Conservation Districts, has placed strong emphasis on vegetative practices. Evidence of this is the enforcement of their range management staff and the establishment of a Plant Material Center at Bridger, Montana. At the PMC various varieties of native plants are studied and developed to make better plants available for revegetating cropland areas and establishing cover where needed.

With continued and increased efforts to improve the rangelands this technical assistance will also need to be expanded continuously.

The Cooperative Extension Service supplies technical assistance through a State, Federal, and County cooperative program. The Service, through County agents and State specialists, serves a vital role in rangeland management programs. The major service they provide is education. Promoting range management to ranch operators, children in 4H programs and the urban people is an important part of the education process.

The State Range specialist has a large responsibility in getting ranchers to apply the latest management techniques and methods developed by research. In the future this part of the Extension Service program will become more important. Programs of particular importance, presently being conducted by the Extension Service, are the Ranchers' Range Schools. These need to be expanded. Additional films and slide presentations are needed.

The 4H range judging contests and projects are moving along very well, but here again a larger program would help in increasing range management on the land.

The Montana State University Department of Animal Science and Range Management has produced invaluable research in grassland management in addition to its classes of range management graduates. The Department today is the nucleus of what will be needed in the future. The present quality is to be praised but its numbers will soon be far short of the need for personnel in research, land management, and the skilled owner-operators that will be required to meet the demands of our range management programs.

In a like manner, their research programs will need to be steadily broadened as the technical know-how on the land requires more intricate techniques in solving management problems.

The University of Montana School of Forestry's Range Management Department is a fine source of technical knowledge particularly in the field of grazable woodlands. Today's foresters need even broader education in range management techniques to fulfill the obligations placed upon them by today's public.

FINANCIAL RESPONSIBILITIES

The largest single financial contributor to proper range management is the landowner. This group of range managers will need to consistently invest large sums of cash into necessary projects such as grazing systems, spraying, seeding, fencing, and water development on their individual units. Individually these are not extremely costly and they will be incorporated as regular cost items in their yearly budgets.

Major projects of large size need special means of financing to spread the cost over several years. The generally accepted banking methods such as commercial and private banks, Production Credit Association, Farm Home Administration, have a direct responsibility to supply credit to landowners in the medium range of financing over a short period of years. When the press for expanded rangeland development and improvement becomes greater these financial institutions will need to give this type of loan a high priority. Also, methods for making the transactions in the simplest manner need to be developed. Long term loans for the complete revamping of a range project will need to be handled by insurance loans and land banks such as the Federal Land Bank. Loans of 20 years or more will not be needed in very many cases but when this is the time period needed to reestablish the resource then this type of loan should be available to the owner-operator as another tool to gain good management.

In rangeland management the general public has a responsibility to assist in protecting the resource, for the general good of the people. The Agricultural Stabilization Conservation Service fulfills the requirement today with its ACP program. Cost sharing can be used by the landowner to lessen the burden of cash expenses. This is a good method for public participation in range management programs.

The ACP is a year to year program which seriously curtails the scope of programs that can be cost shared. This program should be liberalized so long term cost sharing can be made available where the need is evident.

The soil Conservation Services' Great Plains Program, which is a program covering the Eastern Montana area, supplies long term assistance. Additional money is needed in this program to meet the demands for range and other types of development.

All these programs should be studied to determine needed changes to bring them up-to-date for the benefit of rangeland resources improvement efforts.

PRIVATE ORGANIZATIONS INTERESTED IN RANGE MANAGEMENT

There are several private organizations that are interested in rangelands either directly or indirectly.

The most important organization that is devoted strictly to rangelands is the American Society of Range Management. This is a world-wide group with a membership made up of range scientists, researchers, educators, land managers, and ranchers. Their goal is to advance the science and art of grazing land management. There are two sections of the society in Montana - the International Mountain Section in Western Montana, and the Northern Great Plains Section in the Eastern part. This society can supply a great deal of advice and counsel to such things as broad area planning and education programs.

The Montana Association of Soil and Water Conservation Districts is a statewide organization comprised of 59 districts that work in all resource fields. Through their corporation, this group owns the Plan Materials Center in Bridger, Montana. This association sponsors range programs and conducts educational projects.

The Rural Area Development Committee is a volunteer group of persons assisted by the Extension Service to promote rural development. The RAD range management subcommittee is active in the range education field. This group is strongly rancher orientated and will be extremely important in promoting future management programs.

The Agricultural Lenders Ranger School holds an annual campout where specialists come and conduct a range management for fifty or more bankers. This program has been a huge success and should be broadened in scope to more completely cover the entire state each year.

The Montana Conservation Council is made up of conservationists with a deep desire to improve the environment. Their work has concentrated on legislative matters and youth activities. This group has great interest in anything that promotes good range management.

The Wildlife Federation is a state-wide sportsman and conservation group that is dedicated to conservation and a more improved habitat for wildlife. Good game management is one of the practices that the Federation defends. The efforts of urban groups to seek improvement of the general condition of the rangelands will be valuable to the rancher and sportsman alike.'

Rod and Gun clubs are usually the local extension of the Wildlife Federation with similar interests and objectives. The membership of these groups usually includes many ranchers and farmers. Although hunting and fishing is their prime concern the general improvement of the land and cleanliness of the water is also a high priority item in their work.

The Montana Stockgrowers Association is one of the very oldest organiza-

tions in the state. They are looking forward to their centennial celebration. Raising of livestock, use of public lands, and government controls are their high priority programs. Being ranchers they are always vitally concerned with livestock forage. This organization is one of the moving forces of the state and has had much to do with nearly every vegetative program that has been put into action.

The membership today is taking a serious look at the many different products of the grazing lands such as recreation and wildlife. There will be more activity in range management efforts arising from the stockgrowers in the future.

The Montana Woolgrowers Association is a very influential organization in Montana. They have a history of progressive action on all matters of importance to their industry and the general public. While the sheep industry has decreased considerably in recent years, their actions are still very influential and the quality of their work is high. The programs of range management sponsored by the Woolgrowers are very effective. Additional programs should be promoted by organizations such as this and the Stockgrowers.

A P P E N D I X N O . 2

BACKGROUND
OF
PROGRAM DEVELOPMENT

BACKGROUND AND DEVELOPMENT OF THE RANGELAND RESOURCE PROGRAM

A series of important events took place during the development of the rangeland resource program. Included in Appendix No. 2 are copies of documents that reflect the various actions that have been taken to complete the program.

The following is a list of the documents that are included.

1. Letters of request from Hill County Soil and Water Conservation District and the replies from the State Soil Conservation Committee.
2. Minutes of the first meeting of the Steering Committee.
3. Questionnaire developed by Technical Action Panel Committee upon request of the Steering Committee.
4. Tricounty Range Meeting minutes which indicate the local effort that went into the study of the rangeland situation.
5. Summary of the Rural Development Committee (replacement of TAP) questionnaire.
6. Summary of the Range Resource Program as it was presented to the Governor's Council on Natural Resources on January 14, 1970.
7. A list of the members of the Council of Natural Resources and Development -- those who considered the rangeland proposal.
8. Copy of Resolution passed by Council and forwarded to the Governor.
9. Letters sent to Governor by various members of Council stating their opinion of the program.
10. List of discussions and meeting held by the working committee and the Chairman while developing and promoting the program. This report is a copy of the Chairman's report to Steering Committee on July 20, 1970.
11. Letter from Governor Anderson to the Steering Committee.
12. Minutes of the second meeting of the Development and Steering Committee held in Helena in the Senate Chamber at the Capitol.
13. Flow chart for the development and implementation of the Rangeland Resource Program.

April 16, 1969

O. M. Ueland
Secretary of the State Soil Conservation Committee
College of Mineral Science and Technology
Butte, Montana 59701

Dear Ole:

The Hill County Soil and Water Conservation District has gone on record in support of a coordinated range management development program for Montana. The Montana range resource has a real potential for increasing the income of the state.

The Hill County Soil and Water Conservation District requests the State Soil Conservation Committee to make a study of the range resources and to coordinate a comprehensive development program with other agencies and organizations.

Thank you for your cooperation.

Sincerely,

/S/
W. Doyle Stocks, Secretary
Hill County SWCD

W DS/mr

April 23, 1969

Mr. W. Doyle Stocks, Secretary
Hill County SWCD
c/o Extension Service
Box 707
Havre, Montana

Dear Doyle:

The request of the Hill County Soil and Water Conservation District for the State Soil Conservation Committee to make a study of the range resources and to coordinate a comprehensive development program with other agencies and organizations will be brought to the attention of the Committee at its meeting June 2-3 in Lewistown.

Any such study would have to be made with the assistance of range specialists of the various agencies and a program at the state level likewise would need the cooperation of these agencies.

If your District can supply us with more thoughts for a program, we would like to receive them. Much has been done and is being done by individual districts. Do you envision a state range management plan?

Sincerely,

O. M. Ueland
Executive Secretary
State Soil Conservation
Committee in Butte

May 15, 1969

O. M. Ueland
Secretary
State Soil Conservation Committee
Montana Tech
Butte, Montana 59701

Dear Ole:

The proposal of the Hill County Soil and Water Conservation District basically be a request for a state range management plan. The efforts of all agencies would be coordinated for a more effective and meaningful approach.

Dean Hanson will be prepared to elaborate on the proposal in greater detail at your June 2-3 meeting in Lewistown.

Sincerely,

/S/
Doyle Stocks
Secretary, Hill County SWCD

WDS/mr
cc: Dean Hanson

MINUTES OF THE STATE RANGE IMPROVEMENT COMMITTEE

September 5, 1969

Members present: Torlief Aasheim, Jim Posewitz, Peter Jackson, H.S. Fausch, Mons Teigen, John Schroeder, Ned Jefferies, Ted Schwinden, Ave Linford, Wayne Gibson, and Joe Asleson.

This committee was called together by Peter Jackson to discuss a more coordinated program for range improvement in the State of Montana. Mr. Jackson stressed the importance of this resource. He stressed the fact that here was an industry where the income from our natural resources does not go directly out of state.

It was agreed by the committee that this resource is indeed an important one and one which we could stand to have a more coordinated effort for its improvement.

Mr. Fausch discussed a proposal for additional personnel developed by Soil and Water Conservation Districts in Madison and Beaverhead counties. This proposal was shown only to demonstrate the local interest that is developing.

Torlief Aasheim stressed the need to choose one area or one direction to direct our work towards. With rangelands being very diverse lands, it could be quite difficult to pick a single effort in which to direct all our efforts.

It was brought up that there was a need for additional committee representation. The following individuals were suggested: John Draper or Perry Roys from the State Planning Board; Jerry Hillyer from the Bureau of Land Management; Pat Church from the State Grass Conservation Commission; and John Milodragovich from the Forest Service. It was suggested that the Federal Land representatives serve on an observer status only.

Mr. Jackson read the format for a suggested report that he would like to see come from this committee. The report was discussed in detail.

Mr. Aasheim suggested that we use the Technical Action Panel (TAP) program to develop a clear picture of what the state's needs actually are. These needs should be determined from the grass roots level. In this program the local (TAP) organizations in each county would secure information on range improvements needed within their area and possibly suggestions for attacking the problems. These local plans would then be consolidated into area plans and later into one overall state plan.

Mr. Gibson suggested that after all the material was gathered it should be boiled down into a very concise report that would not require a large volume of written material.

It was decided that we should implement this program by having the Soil and Water Conservation Districts request from the state TAP committee that the TAP organization study this problem

Respectfully submitted,
Ned W. Jefferies
Secretary

SUBJECT: QUESTIONNAIRE FOR OBTAINING INFORMATION FOR
 DEVELOPING A STATE RANGE RESOURCE PLAN

OBJECTIVES OF THE QUESTIONNAIRE:

1. Stimulate the thinking at the local county level in regards to the development of the total range resource and its effect on the economy of the counties.
2. Create an awareness for the local citizenry-rural and urban of the magnitude and importance of the rangeland resource.
3. Provide improved guidance for development of research and educational programs to meet the needs of range resource management.
4. To coordinate the efforts of agencies and individuals in reaching the range resource development potential.
5. Obtain suggestions for improving technical assistance to the range resource managers and users.

It is the hope of the State Range Resource Plan Committee that a study of the range resource information will lead to formation of county range resource committee programs.

Statement of Resource Data For _____ County*

1. Total land area of _____ County is _____ acres.
2. Privately owned rangeland and grazable woodlands comprise _____ acres. (Includes State and County land.)
3. Federally owned and managed rangeland comprise _____ acres.
4. Rangeland and grazed woodland comprise about _____% of the county.
5. Annual income from the sale of livestock and livestock products in your county amounts to approximately \$ _____.

*Taken from Conservation Needs Inventory and Agricultural Census.

Suggestions the TAP Committee Might Consider in Obtaining Additional Local Information:

1. Consider the present and potential uses of rangeland in your county. How can they be developed to increase the income and enhance the environment of your county through such uses as the following?

Livestock grazing

Wildlife

Big game

Upland birds

Fishing

Watershed protection

Recreation

Hunting

Fishing

Dude ranching

Horseback riding

Camping and picnicking

Photography

Back packing

Rockhounding

Etc.

2. Estimate the percentage and acres of rangeland (including private and public) in your county in good to excellent condition and percentage and amount in less than good condition class.
3. Cost-return figures on livestock operations carried out with rancher groups throughout the State show that if each acre below good condition class were improved to good or excellent condition and properly managed, the annual net income could be increased about \$1.50 per acre of range improved. In addition to this, money coming into an area is spent at least twice before it leaves the community. Multiply the acres of rangeland in less than good condition class by \$3.00 to arrive at a reasonable annual potential increase of economic impact from range improvement for livestock operations.
4. Consider and comment on significant range problems specific to your county, such as:

Low calf and lamb crop percentages

Low marketing weights

Brush and weed infestations

Blue grama and clubmoss infestations

Overgrazing

Lack of spring pasture

Small uneconomic units'

Rough topography

Inadequate stockwater
 Shortage of hay produced
 Too much hay produced
 Too few game animals and birds or poor distribution
 compared to the potential
 Rancher-agency planning coordination

5. What percent and amount of county taxes come directly from livestock?
6. What groups in your county should be involved in range improvement projects that are not now involved?
7. Please give suggestions for minimizing ranchers' problems concerned with recreational use of rangeland, such as:
 - (a) litter laws
 - (b) public liability
 - (c) fire protection
 - (d) vandalism
 - (e) others (please get ranchers' suggestions and urbanites' suggestions)
8. Summarize the prevailing ranchers' attitude towards range uses other than livestock grazing.
9. Summarize prevailing urbanites' attitude towards range uses other than grazing for livestock.
10. Estimate the percent of ranch operators who would be interested in supplementing their income by charging for hunting, finshing, picnicking, camping, guided pack trips, trail rides, etc., on their private lands.
11. List erosion or pollution problems originating or existing on rangeland in your county.
12. List acres and species of weeds or other undesirable plants that are a significant problem on rangeland in your county.
13. List range research that should be implemented.
14. List range management practices not now recommended that possibly should be.
15. List range management practices now being recommended that should not be.
16. In what ways could federal and state agencies improve their effectiveness in the range program?

17. Ranchers' priority in scheduling money and time for range management is currently low. How can we develop greater interest in rangelands?
18. How can we develop greater interest in the urban public concerning the range resources?

TRI-COUNTY RANGE MEETING

February 24, 1970

The Tri-County Range meeting was called to order at 10:00 AM by Jim Kolar, SCS, Whitehall with 24 attending.

Peter V. Jackson gave the purposes and objectives of the range resource inventory and the need for excellerated range improvement. He stated that 70% of the state was rangeland which amounts to 66 million acres. He cited that rangeland is rapidly developing other land uses such as recreation, wildlife, urban development, etc. Jackson noted that an estimated 30 million acres of rangeland could be improved one condition class which would increase the state's economy for that land at a rate of an estimated \$1.15 per acre. He compared this to the 19,6 million Huntley-Chrysler Recreation project.

Jim Kolar gave an inventory of range by townships of all rangeland in Jefferson, Madison, and Silver Bow Counties and summarized the area in excellent-good condition and fair-poor condition. (copy of this summary is attached) The summary of the recent Conservation Needs Inventory of private rangeland was also reviewed.

Bob Ross, State SCS Range Conservationist, was called on to present a summation of many cost-return appraisals developed with ranchers during the past several years. The following is a tabulation of information presented.

5,000 Acre Range Unit	Silty Site 10-14 pz		Good Condition proper use
	Fair Condition overgrazed	proper use	
Animal units	200	100	150
Calf Crop	75%	88%	90%
Weaning Wts.	325#	400#	440#
Winter Feed Period	5mo.	4mo.	3mo.
Gross Income	\$11,245	\$9,221	\$13,851
Annual Costs	\$13,164	\$7,401	\$ 8,243
Net Return	\$-1,919	\$+1,820	\$+5,608

Considerable discussion was held on this subject. Several felt that it is difficult to convince a rancher to make a sharp decrease in stocking rates necessary to improve range condition. Bob Ross pointed out that in many units he had worked on with ranchers, that very seldom it was actually necessary to cut the animal units. Other planned improvements such as cross fencing, water developments, tame pasture, etc. often made the difference in the improvement plan.

A need for cost accounting of different phasis of the ranch operation was considered necessary to find out he phases that were making money and those

not. Different types of ranch operations were discussed including the possibilities of feed lots.

RANGE PROBLEMS SIGNIFICANT TO OUR COUNTIES

1. Brush and Weed problems! The high cost of weed control and the availability of chemicals and equipment were discussed. It was pointed out that the range in better condition will help defer range weed infestation. Noxious weeds, high weed control costs are invertible.

Noxious weeds specific to our area are:

- (a) Dalmation Toadflax (Yellow)
- (b) Thistle - Canadian Sow
- (c) Russian, Spotted Knapweed
- (d) St. John's Wart
- (e) Baby's Breath
- (f) Goatweed

Brush and tree invasion is a problem in many of our areas. Douglas Fir and Juniper are encroaching on grass land in foothill areas. Sagebrush, rabbit brush, and other woody plants have invaded many acres of range because of poor grazing management; chemical or mechanical control may be necessary to expedite range improvement.

2. Overgrazing, clubmoss and blue grama infestations: Poor grazing management in past years has increased these infestations. Range deferment or other range management techniques will increase the grazing productivity of these areas.
3. Lack of spring pasture: Reseeding low-condition rangeland (or cropland) to a tame grass species will allow extended grazing.
4. Small uneconomic units: With automation, small units can't survive. Size of an economic unit is steadily increasing. Assets-liabilities must be in balance and ranchers have to look at the true picture. There is a large turnover in ranchers in the area. Interests with outside money are taking up the land.
5. Inadequate stockwater: Plastic pipelines are making it feasible to get stockwater distribution on range.
6. Shortage of hay production (or too much): A large variance in ranch units exist in the area as far as hay production is concerned. Machinery costs are high. Hay yields per acre are low in some areas. Contracting of hay from larger irrigated areas has possibilities. There is a need for a better balance in individual ranch feed-grazing operations. Generally the feed period should not be any longer than that needed because of climate conditions.

7. Potential for game animals and birds: Rangeland in poor-fair condition provides poor habitat for wildlife. Winter range is a limiting factor in game management. Improved range condition, especially in the lowlands, will increase food and cover for wildlife.
8. Rancher-agency planning coordination: Many ranchers in our area work with several agencies and in many instances agency has conflicting plan objectives. Example was cited, "What is considered an animal unit?" It was felt that much improvement has been made in joint planning, however, a lot more coordination is needed. Also pointed out was the fact that changes in agency personnel have made ranch operations changes necessary. Mining claims have been a problem.
9. County taxation: The amount of county taxation directly contributed to rangeland is difficult to arrive at. Estimates range from 5 to 40%. It was felt that counties need to develop a more finished product from their livestock (through feedlots) to build up the tax base from the range resource.
10. Recreation and other uses of ranges; There is a need for new litter laws. Since city dumps have been closed to certain types of garbage disposal, people are littering rangeland.

Four wheel drive, motor bikes, etc. are causing erosion on rangeland. With increased recreational use of rangeland it is more evident that changes in liability laws are needed. Recreation leases to individuals and groups was discussed as an income possibility. The situation must be right. Landowner interest is very important. Interspersal of private and public lands necessitates broader planning in recreation developments.

Bill Richter briefed the group on his work with ranchers in assisting them in preparing complete or partial budgets on their individual units.

The meeting was adjourned at 4:20 PM.

THE RANGE RESOURCE OF MADISON, JEFFERSON, AND SILVER BOW COUNTIES

2/70

Resource Inventory for all grazed areas - Federal, State & Private
(compiled by the Technical Action Panel)

County	Total Rangeland	Good to Excellent	Fair to Poor	Woodland Grazed	Tame Pasture
Madison	1,292,660	711,875	580,785	403,366	106,753
Jefferson	497,785	240,080	257,705	218,411	21,870
Silver Bow	201,462	66,754	134,198	88,216	2,700
Total	1,991,907	1,031,709	973,198	709,993	131,323

Cost-return figures on livestock operations carried out with rancher groups throughout the State show that if each acre below good condition class were improved to good or excellent condition and properly managed, the annual net income could be increased about \$1.50 per acre of range improved. This would indicate that if all of the 973,198 acres of fair and poor condition range in this three county area were thus improved, the value of the range resource would be enhanced by over one million dollars of annual income.

Conservation Needs Inventory Data - private lands only
(compiled 1967)

County	Total Grazable	*Treatment adeq. or not feasible	*(proper use) protection only	Brush Control	Seeding
Madison	1,013,156	257,350	437,724	198,762	25,904
Jefferson	390,716	88,454	247,174	23,432	4,807
Silver Bow	177,371	54,651	82,746	6,141	2,297

(*) includes grazed woodland

General Resource Data for Counties (taken from CNI and Agricultural Census)

	<u>Silver Bow</u>	<u>Madison</u>	<u>Jefferson</u>
Total land area - acres	458,240	2,259,200	1,056,640
Private range and grazed woodland	175,371	923,154	368,846
Federal range and grazed woodland	138,204	911,943	350,000
Percentage of total county land comprised of range- land, grazed woodland	68%	81%	68%
Annual Income from sale of livestock and livestock products	\$539,750	\$6,942,525	\$2,246,900

SUMMARY OF RDC QUESTIONNAIRE
FOR
STATE RANGELAND RESOURCE INVENTORY AND PLAN

1. Total land area of Montana 93,089,323 acres.
2. Privately owned rangeland and grazable woodland 46,078,479 acres. (includes state and county land)
3. Federally owned and managed rangeland and grazable woodlands 15,150,509 acres.
4. Rangeland and grazable woodland comprise about 65% of the land area of Montana (61,228,988 acres).
5. Annual income from the sale of cattle and sheep is about \$250,000,000. (average of 1964-1967 was \$250,522,000 according to Montana Agriculture statistics)
6. Range Condition:

Good to Excellent	31,840,000 acres	52%
Less than Good	29,389,915 acres	48%

Range in good to excellent condition furnishes optimum grazing for livestock, wildlife habitat, watershed protection and recreation.

7. Present and potential uses of rangeland:
 - A. Livestock Grazing - More effective management is needed to improve forage and balance feed forage and livestock requirements:
 - (1) Proper Use - If each acre of range in less than good condition was properly managed and improved to good or excellent condition, the annual economy of the state could be increased approximately \$75,000,000 just through the livestock industry.
 - (2) Workable grazing system designed for the grazing unit.
 - (3) Range improvements practice:
 - (a) Stockwater Development
 - (b) Fencing
 - (c) Brush and Weed Control
 - (d) Range Renovation where applicable
 - (e) Fertilization on ranges where applicable or feasible
 - (f) Range seeding or establishing tame pastures to take the grazing pressure off of native ranges. (Special emphasis is to seed grass in areas of dry cropland that has been taken out of small grain production.)
 - B. Wildlife - Ranges can be managed to produce both livestock and wildlife. There is a great economical potential for managing private ranges to provide an additional ranch income by leasing privileges for hunting and fishing.
 - C. Watershed - Ranges in good to excellent condition provide optimum vegetative cover and watershed protection. Approximately half of

the range in the state has considerably less than optimum cover.

- D. Recreation - present interest of ranchers for including recreational uses of their rangelands generally is low. There is a tremendous potential for ranchers to supplement their ranch income from recreation enterprises and aesthetic uses such as:

Dude Ranching
Horseback Riding
Family Vacations
Camping and Picnicking
Back Packing
Rockhounding
Photography
Scenic Beauty and Solitude
Etc.

8. Range Problems:

- A. Low calf and lamb crop percentages.
- B. Low marketing weights -- especially a problem in the eastern part of the state. Could be significantly improved with better range management.
- C. Brush and weed infestations.
- D. Blue Grama and clubmoss are a definite problem, particularly in the northeastern part of the state.
- E. Low range conditions.
- F. Lack of adequate spring pasture.
- G. Small uneconomic ranches. Parttime ranchers with small uneconomic units and "outside" jobs that do not have to depend on the land for their livelihood often carry out poor range management. This is generally more of a problem in heavily populated areas. The greatest is in the western third of the state.
- H. Rough topography in localized areas.
- I. There is still some need for stockwater developments, but much progress has been made in recent years.
- J. Balance of grazing forage, winter feed and animal requirements.
- K. There is a definite need for better rancher-agency coordination. There should be a two way flow of ideas and more rancher participation in planning practices that will lead to range improvement. Range management planning where private and public lands are involved should be coordinated at the beginning of the planning.

9. Most organizations in Montana -- urban and rural -- should be interested in the economic impact and responsibility of rangeland management.

Agriculture Groups
All schools
Money lending institutions
Chambers of Commerce
Service Clubs
Civic Clubs
Sportsmen's groups
Environmental Oriented Groups

Youth organizations
 County Commissioners
 City-County Planning Boards

10. Suggestions for minimizing ranchers' problems concerned with recreational use of rangeland:
 - A. Liability and Fire Protection - Revision of laws and legislation are needed to protect the rancher against public liability and fire.
 - B. Litter and Vandalism - Litter and vandalism laws need more enforcement. Much of the problems can be minimized by education, mutual understanding between sportsmen and ranchers, and sportsmen policing each other.
11. Most ranchers have historically been oriented to livestock use of rangeland. Attitudes vary from no other use to moderate multiple use, with most ranchers acknowledging some multiple use:
 - A. Reasons for Opposition to "other use" of rangeland:
 - (1) Liability, fire, litter and vandalism problems
 - (2) Reserve their private lands for themselves and friends
 - (3) Desire for solitude
 - (4) Do not want others on their domain
 - B. Many ranchers would welcome other uses by the public if they could trust them and control their activities.
 - C. Many rancher hesitate to charge the public for recreation use of their private lands because it is against rancher hospitality custom.
12. In general, the public favors access and recreational use of private lands, but do not always accept their own responsibility of protecting it.
13. Erosion and pollution from rangeland is negligible except in the following localized areas:
 - A. Soil loss from deteriorated ranges
 - B. Soil disturbances from strip-mining, mining explorations, and oil fields.
14. Noxious weeds such as leafy spurge, toadflaxes, knapweeds, Canada thistles, burdock, goatweed, etc., are a tremendous threat to rangeland. Infestations of big safebrush, fringed sagewort, broom snakeweed, etc., are also major problems in some areas.
15. Range research that should be continued or implemented:
 - A. A non-chemical method of weed and brush control.
 - B. An economical method of restoring clubmoss-blue grama infested ranges
 - C. Speed up research on rehabilitation of disturbed range areas such as striped-mined areas.
 - D. Chemical, mechanical, and biological treatment of fringed sagewort.
 - E. Range fertilization and renovation.
16. Suggestions for improving effectiveness of federal and state agencies:
 - A. Closer coordination and technical work.
 - B. Involve local people in conservation decision making.

- C. More effective management of state owned lands.
- D. Better tenure security measure of state and federal lands to increase incentive for improvement of these lands.

17. Ways of developing greater interest in rangeland resource management:

- A. Demonstration ranches.
- B. Hold tours and use other educational means to point out benefits of good range management.
- C. Continued education of the rancher to show that native grass is a manageable crop and can be managed for high or low yields. Point out economics of improved range production. The rancher must be aware that the benefits from range improvement are not received in one year, but are spread over several years.
- D. Use of specialists in the field to help operators understand new ideas.
- E. Lending agencies need to be oriented to the range resource so they may advise their clients properly.
- F. Educational programs on television, radio, slide talks, etc.
- G. Educational programs to reach all levels of schools.
- H. The urban public must be made to realize the fact that range improvement not only benefits the rancher, but the public in general. Increasing the economy of the rancher contributes to the economic impact of the community.
- I. Local resource development groups should be oriented to total environmental effects.
- J. Set up lectures, tours, pack trips, etc., in which urban people can participate.

18 Recommendations for priorities of action that would seem logical in implementing the State Rangeland Resource Plan:

- A. Recreational impact has already hit other western states -- Montana is next. In the very near future we will have a new audience and new uses for rangeland. WE need to be tooled up to be able to cope with the recreational use demands.
 - (1) Recommend a policy decision from the Attorney General regarding Montana Liability Laws and rancher responsibility.
 - (2) Recommend legislation on liability that will make it feasible for a rancher to be able to enter into public use enterprises on his private lands.
 - (3) Public financial support is recommended to help defray the cost of watershed protection and pollution abatement.

GOVERNORS ADVISORY COUNCIL ON NATURAL RESOURCES AND DEVELOPMENT

resolution regards grasslands of January 14, 1970

A representative group of the Steering Committee met in Helena, January 14, 1970. A presentation was made of the State Rangeland Resource Program to the Council of National Resources and Development. The Council enthusiastically received the presentation and unanimously passed the following resolution to be sent to the Governor for consideration.

Mr. Roys and Mr. Moon jointly moved that this council recommend to the Governor that he urge state agencies concerned with grasslands and their management and protection take whatever measures they can within their present means to coordinate their activities and that the Governor consider recommending to the legislature that the State Soil Conservation Committee be directed to undertake a coordinating function and be funded accordingly.

(Duly seconded and passed)

June 19, 1970

Mr. Pete Jackson, Chairman
Development and Steering Committee
State Rangeland and Resource Plan
Harrison, Montana 59735

Dear Pete:

As you know, a number of state agencies have, at my request, examined the State Range Land Resource Plan to determine what they could contribute and what improvements might be made. I have enclosed copies of these statements to provide you with a more detailed idea of the inputs being considered.

Suggestions as to improvement centered on four areas:

(1) The use of herbicides for bush control should come under broad review by a number of agencies to determine the long-range effects of game, soil, and water.

(2) The Coordinator's position should be established within an existing agency to reduce expenditures and the proliferation of offices. The name of the agency should be included in the plan.

(3) More emphasis should be placed on the contribution which can be made by trees and shrubs to the goals outlined in the plan.

(4) With the increase in rangeland and its use for recreational purposes, the possibility of range fires also increases. More emphasis should be placed on programs to reduce this possibility.

Other suggested improvements are included in the attached letters.

Generally, the goals of the plan are commendable and should, as stated, lead to substantial improvements in the amount and quality of rangeland available to Montana with concomitant economic and recreational benefits.

I wish the program every success.

Sincerely,

/S/

Forrest H. Anderson
Governor

June 9, 1970

Mr. Gary Wicks
Administrative Assistant
Office of the Governor
State Capitol
Helena, Montana

Dear Mr. Wicks:

We were requested at the last meeting of the Council on Natural Resources and Development to notify you relative to what we can contribute towards the development of the Montana Rangeland Resources Plan.

The Montana State Highway Commission will cooperate in any way possible to assure the success of this plan. We can cooperate by making sure out highways, etc. do the least amount of damage through resource areas and we will continue to keep down the erosion along our highways as much as possible. In this way, we think that we can help considerably in conserving the rangeland resources.

We will be happy to do anything that it is determined necessary for us to do.

Sincerely,

/S/

Lewis M. Chittim, P.E.
State Highway Engineer

LMC:ld

May 29, 1970

Mr. Gary Wicks
Governor's Office
Capitol Building
Helena, Montana 59601

Dear Mr. Wicks:

We have reviewed the State Rangeland Resource Plan prepared by the State Soil Conservation Committee and this appears to be an excellent plan.

The Water Quality Standards adopted by the State Water Pollution Control Council sets limits for sediment and turbidity above that naturally occurring. In the Standards, naturally occurring is defined as "conditions or material present from runoff or percolation over which man has no control or from developed land where all reasonable land, soil and water conservation practices have been applied." The Rangeland Resource Plan not only is a step to improve rangeland, but it will also improve the quality of the State's water by retaining water during runoff periods and thereby decreasing sediment and turbidity in the State's streams.

Regarding our input to the Plan, perhaps we will be able to monitor the water quality below a few areas before rangeland conservation is practiced and again after it is put into effect. It will be of advantage to have field data to show actual results from conservation practices applied.

Soil and water conservation is water pollution control. We heartily endorse this plan.

Sincerely yours,

/S/

Claiborne W. Brinck
Secretary of Montana
Water Pollution Control Council

Gary Wicks, Administrative Assistant
Office of the Governor
State of Montana
Helena, Montana

Dear Gary:

At the May 6 meeting of the Governor's Council of Natural Resources and Development, the agencies were asked to comment on the State Rangeland Resources Plan with respect to input, benefit and deficiencies.

The State Rangeland Plan is so broad in scope that specific comments are difficult. The State Land Department is vitally concerned with the overall problem since it has administrative responsibility for some four million acres of grazing land.

With the acknowledged concern of the Governor for a unified and effective executive branch, I suggest that the implementation of the program be made a direct responsibility of an existing state agency. I agree with the concept of a resource coordinator as proposed; if funded, he should be placed in the appropriate state agency. The use of an advisory committee would be valuable, but all work should be closely coordinated with the appropriate state and federal agencies.

The Land Department has begun work on a resource inventory of state lands and is anxious to share relative data and to assist in defining objectives. This kind of work should not be done on a crash-program basis, and education is an important part in gaining public cooperation.

Sincerely,

/S/

Ted Schwinden, Commissioner
State Lands and Investments

Received May 27, 1970

June 1, 1970

Mr. Gary Wicks, Administrative Assistant
Governor's Office, Capitol Post Office
Helena, Montana 59601

Dear Gary:

As requested by the Council on Natural Resources and Development, I am submitting a report on how the State Rangeland Resource Plan would benefit our department and what input we might have.

The Department of Planning and Economic Development would be benefited in several ways by the implementation of the Montana Rangeland Resource Plan. The Plan sets out potentials for economic growth particularly through increased livestock production, private outdoor recreation development and an expanded tax base.

We are vitally interested in the protection and enhancement of the natural environment through improved range condition. Preventing soil erosion and stream siltation, stabilizing stream flows, increasing vegetative cover and expanding wildlife habitat are not only essential social and aesthetic values, but contribute to a better economic environment both present and future.

There are four areas in which we feel this department can contribute to the implementation of this rangeland plan.. One, we can provide some advice and assistance in agri-business.

Two, as the state planning agency, we are in a fairly good position to participate in some of the rangeland planning, especially interagency planning and programs relating to the range resource. While the State Range Coordinator would be responsible for identifying conflicts of interest and in trying to resolve many of them, this department could help avoid or resolve duplication or conflicts among state and federal agency programs, both through our function as a Clearinghouse for federal funds and in coordinating state-wide planning. We also can provide technical assistance in planning, generally.

Three, we are charged with developing private outdoor recreation in Montana, and long range recreation planning will probably involve the range resource. This department will be able to help farmers and ranchers establish outdoor recreation enterprises, lending guidance in both financing and planning.

Four, at some point in the future, Montana rangelands may be affected to some degree by community development and expansion of urban, residential, and recreational use. Again, our Community Development staff can provide professional planning expertise in these areas.

/S/ Perry F. Roys
Executive Director
Department of Planning and
Economic Development

May 21, 1970

Mr. Gary Wicks
Administrative Assistant
Office of the Governor
State Capitol Building
Helena, Montana 59601

Dear Gary:

This is our response to you regarding the State Range Land Resource Plan. If the plan is implemented it will greatly benefit those Montana farmers and ranchers who derive all or part of their income from the grazing of livestock on range land. Of course, there will be other benefits to other groups and there will be secondary benefits as a result of the increased agricultural income.

We are not aware of any deficiencies in the plan.

This department endorses the State Range Land Resource Plan and we will do all that we can to assist in the implementing of it. The Department of Agriculture is in contact with many agricultural organizations both through our Ad-Hoc Committee of Agricultural Organizations and through more casual contacts. We would be very happy to present the plan at any meeting of the agricultural organizations that we hold.

I have a man on my staff who spends a good deal of his time in the area of public information. I would be very happy to have my staff member assist in preparing and distributing informational releases on the Range Land Resources Plan.

Very truly yours,

/S/

George Lackman
Commissioner of Agriculture

May 26, 1970

Mr. Gary Wicks
Governor's Office
State Capitol
Helena, Montana

Dear Gary:

Subject: Inputs into proposed state range plan

Reference: CNRD minutes of May 6, 1970

As indicated in the proposal for a state rangeland resource plan, this would be a program activity of the State Soil Conservation Committee.

A major objective would be to develop a range program utilizing the services of present state and federal agencies in a common coordinated effort.

Presently the Soil & Water Conservation Districts give great emphasis to proper range management in their individual programs, and thru their memorandums of understanding with the Soil Conservation Service and other agencies receive much assistance to pass on to individual ranchers. This assistance to ranchers has generated much good range management, and at the same time pointed up many opportunities for further range development, especially for uses other than forage for livestock and the great economic impact this can have.

The state Soil Conservation Committee budget does not at the present time contain a Range Program. It would be hard to say what percentage of our administrative budget is devoted to range but indirectly in our work with Soil & Water Conservation Districts and other agencies much of our present effort ends up in promoting range resource development.

We have reason to believe that benefits even greater than suggested in the proposal will result, providing state and federal agencies continue to be funded as they are and the State Soil Conservation Committee can be funded to provide a full time person to the job together with proper secretarial and administrative materials.

Sincerely,

/S/

O. M. Ueland
Executive Secretary
State Soil Conservation
Committee

Memorandum To: PROFESSOR UUNO M. SAHINEN
FROM: M. K. BOTZ
Re: MONTANA RANGELAND RESOURCE PLAN
Date: June 2, 1970

As you requested, I have looked over the Montana Rangeland Resource Plan, and I think the Ground-Water Branch can contribute to this program. We can provide technical assistance to this program in three areas: 1. Study of ground-water development potential, 2. Study of stream development, and 3. Evaluation and control of pollution

We would look forward to working on a program such as this and would be glad to assist in the planning and development stages.

Montana Bureau of Mines and Geology

May 15, 1970

Honorable Forrest H. Anderson
Governor of Montana
State Capitol Building
Helena, Montana 59601

Attention: Gary Wicks

Dear Gary:

This is to answer your request for comments on the "Montana Range Land Resources Plan."

I have reviewed the outline of this plan, and feel there are several places where it could be changed or improved. For example, paragraph 1 on page 20 and 23, suggests that timber should be controlled on the range lands of the State. This might be interpreted by some that timber should be eradicated to make way for new range. Although this has been done on many thousands of acres in Montana, it is not always a desirable thing to do, neither is it always economical. Many ranchers have gone broke over the years doing this. It is my feeling that timber which encroaches our range land because of overgrazing could be controlled, but native stands should not necessarily be controlled to expand range.

Paragraph 3, page 27 says "a serious necessity to get new or updated laws to cover fire protection." It is my feeling that with some very minor amendments, the existing fire laws covering range land are adequate--all we need to do is implement them. State Forestry, in cooperation with county commissioners, are in the process of doing this at the present time. I would safely bet that all range lands in Montana will be under a State Forestry-County Cooperative Program providing a fair level of protection by 1974-76.

I think the goal outlined in the plan for increased recreation on the private range lands is highly optimistic; especially in view of the fact of the high fire danger to the range lands which would occur with increased public use. It is my feeling that as long as the private landowners must pay their own fire protection cost, that they will continue to resist providing an open door to the public. Once the people who use these lands recognize that they must pay some of the cost of ownership, then, I believe landowners will be more willing to share their lands with them.

It occurs to me that there should be a place in the plan for aesthetic enhancement through the planting of trees and shrubs of the range area. This would provide not only beauty but shelter for humans and animals as well. The erosion prevention aspects of tree planting should also be considered in the range plan. I agree that the implementation of the range land plan is a very large job and that the position of Coordinator should be established, however, I do not feel it should be a separate agency, but could well be handled by an existing state agency and/or Board.

There are several ways in which my office could assist in the implementation of the range land plan. The first would be through our Cooperative Forest Management Program where our service foresters when working with a cooperator, point out the improvement possibilities of his forested range and advise him where to get assistance on other range land.

The second would be through our cooperative fire protection agreements with the various counties. Here we could encourage the counties to provide a higher level of fire protection to the range lands and ourselves work toward increasing the fire protection rates assessed landowners for the grazing lands.

A third area where we can cooperate is by providing seedling trees and shrubs from our tree nursery.

The State Forester is not authorized to use $2\frac{1}{2}\%$ of the grazing fees for improvement of the forested ranges. Therefore, improvement of these ranges would necessarily need to be on a voluntary basis from our licensees with perhaps more rigid requirements in our licenses as they are renewed.

I can see some problems develop if the Range Land Resources Plan is successfully implemented. One major problem is that we could have thousands and thousands of acres of lush grass belly deep to a tall cow. This would set the stage for some of the largest, most severe range fires that Montana has ever seen. Perhaps this plan should anticipate this and provide for a sufficiency of fire breaks where large areas of the prairie are not roaded.

Yours truly,

/S/

Gareth C. Moon
State Forester

May 15, 1970

Governor Forrest H. Anderson
State Capitol Building
Helena, Montana 59601

Dear Governor Anderson:

In keeping with the request made through the Governor's Council on Natural Resources, the Montana Fish and Game Department has looked into the proposition of participating in development of the State Range Land Resources Plan. This plan has been presented to the Governor's Council on Natural Resources and the Governor through the State Soil and Water Conservation Committee.

The Fish and Game Department is vitally interested in improving the range lands in this state. Management of State Fish and Game Department owned lands will certainly attest to the fact that we believe the basic range resource to be the most important ingredient for the continued production of big game animals in this state. While we recognize the importance of the overall improvement of state range lands, man power limitations will definitely restrict the degree of our involvement in this process.

As the range management plan is outlined, the area of greatest concern to us will be centered around the reported necessity to bring vast acreages of brush under control. We make the assumption that much of this brush control will be attempted through the application of various herbicides. Since this particular action program is of most vital concern to us our main area of involvement should be related to these brush control programs.

In the event that public funding or public land become involved in attempts to control certain species of brush our district game management personnel should definitely be involved in planning and reviewing these projects. This review function that we will accept represents the major contribution that our department can make to this total planning effort. Our department would also be available to comment on other range development techniques. Particularly those practices that will be applied on public lands.

Sincerely,

/S/

Frank H. Dunkle
State Fish and
Game Director

MONTANA RANGELAND RESOURCE PROGRAM MEETING

Steering and Developing Committee
Helena, Montana

July 20, 1970, (Second Meeting)

The meeting was called to order by Peter Jackson, Chairman, on July 20, 1970, at 10:00 AM, in Helena, Montana.

Personnel Present: Gary J. Wicks, Governor's Office, Helena, Montana
Bob Arnold, State Forestry Department, Missoula, Montana
John M. Schroeder, State Soil Conservation Committee, Lolo
Charles Greene, Farmers Home Administration, Bozeman
Howard Foulger, Forest Service, Missoula, Montana
Don Ryerson, Montana State University, Bozeman, Montana
Ned. W. Jefferies, Extension Service, MSU, Bozeman, Montana
David A. Smith, Montana Wool Growers, Helena, Montana
Melvin L. Morris, University of Montana, Missoula, Montana
Bob Raundal, State Lands and Investments, Helena, Montana
O. M. Ueland, State Soil Conservation Committee, Helena
Charles R. Meyer, Department of Agriculture, Helena
Ed Zaidlica, Bureau of Land Management, Billings, Montana
Joe Egan, Montana Fish and Game, Helena, Montana
Jim Posewitz, Montana Fish and Game, Helena, Montana
C. R. Draper, Department of Planning and Economic Development, Helena, Montana
David L. Ricks, Montana Water Resources Board, Helena
A. B. Linford, Soil Conservation Service, Bozeman, Montana
T. S. Aasheim, Cooperative Extension Service, MSU, Bozeman
J. A. Asleson, College of Agriculture, MSU, Bozeman, Montana
Ken Meyers, Water Resources Board, Helena, Montana
Arnold Rieder, Grass Conservation Commission, Boulder
Bob Ross, Soil Conservation Service, Bozeman, Montana
Dean Hanson, State Soil Conservation Committee, Gildford
Peter Jackson, Montana Association of Soil and Water Conservation Districts, Harrison, Montana
George McGaffick, Council of Natural Resources and Development, Helena, Montana

The purpose of the meeting was to discuss finalizing the tentative draft of the Montana Rangeland Resource Program and consider various needed changes, alterations, or deletions.

Mr. Gary Wicks from the Governor's Office read a letter from the Governor wishing the committee success and suggesting the following improvements that might be made in the Program: (1) The use of herbicides for brush control should come under broad review by a number of agencies to determine the long-range effects on game, soil and water. (2) The Coordinator's position should be es-

established within an existing agency to reduce expenditures and the proliferation of offices. The name of this agency should be included in the plan. (3) More emphasis should be placed on the contribution which can be made by trees and shrubs to the goals outlined in the plan. (4) With the increase in rangeland and its use for recreational purposes, the possibility of range fires also increases. More emphasis should be placed on programs to reduce this possibility.

Mr. Wicks gave an example of how an individual ranch, through use of proper management and making necessary land improvement, substantially improved the income to the ranch. This ranch increased its \$300,000 income %163. Mr. Wicks urged range improvement throughout Montana by individual ranches. He concluded by offering the assistance of the Governor's office, in whatever manner possible.

The minutes of the September 5, 1969 meeting were read and approved.

Bob Ross gave everyone a folder containing information on what has transpired on the program to date.

Mr. Ross, Soil Conservation Service, explained a questionnaire had been sent to the County Technical Action Panels asking for information from each county regarding rangelands. This questionnaire also acquainted the counties with the rangeland resource they have available in their county. The returned information was summarized in three areas: western, eastern, center. Mr. Aasheim, Cooperative Extension Service, then made a statewide summary which was discussed in detail.

Mr. David Ricks, Montana Water Resources Board, reported at the Governor's Advisory Council on Natural Resources and Development. Mr. Roys and Mr. Moon moved "that this council recommend to the Governor that he urge state agencies concerned with grasslands and their management and protection take whatever measures they can within their present means to coordinate their activities and that the Governor consider recommending to the Legislature that the State Soil Conservation Committee be directed to undertake a coordinating function and be funded accordingly." Pete Jackson stated that since no one was in disagreement with this resolution, it will be considered as part of the beginning program.

In order to be able to take an active part in the discussion, Pete Jackson asked Dean Hanson, State Soil Conservation Committee, to act as Chairman for the remainder of the meeting.

Pete Jackson reported as Chairman of the Planning Committee, he has attended meetings with the Rural Area Development Committee, Range Committee, Stockgrowers Association, Council of Natural Resources and Development, American Society of Range Management, Montana Association of Soil and Water Conservation Districts, State Soil Conservation Committee, Technical Action Panel Executive Committee (which has been changed to the Rural Development Committee)

Area Meetings of the Soil and Water Conservation Districts, Grass Conservation Commission and Bureau of Land Management. The program has been re-written four times and is still in the draft stages. The Soil Conservation Service has volunteered technical, secretarial and a certain amount of printing services. The Cooperative Extension Service has offered their technical help. The Range Organization at the University will write the range management practices and plans to show what is available. The Forest Service has volunteered any technical services they have.

Dean Hanson asked for comments from the members of the committee.

In relation to the plan as it has progressed so far, Mr. Ed Zaidlicz, Bureau of Land Management, stated he is enthused about the program and felt that we have a real need for a good committee such as this. This program will benefit Montana.

David Smith, Montana Wool Growers, is impressed with the work and pledges support of their organization in working with the program in any way they can.

Joe Egan, Montana Fish and Game Department had no comments at this time.

Arnold Rieder, Grass Conservation Commission, stated he came to the meeting to listen and learn about the program and had no comments at this time.

Don Ryerson, Montana State University, is in full support of the program.

Bob Arnold, State Forestry Department, spoke about the fire protection aspect being planned. With increased recreational use there will be the possibility of more fires. Their office is already working with all the counties and entering into Cooperative Agreements with County Commissioners to increase their fire protection on private and state-owned lands. Mr. Arnold stated they have a coordinator in their office who would be willing to help the committee develop the fire protection aspect of the plan. He also felt more emphasis should be placed on tree plantings for wildlife and livestock protection.

Melvin Morris, University of Montana, felt the plan is good and things are going along quite well. One of the objectives should be to tell the farmer how important good range management is, and make him as sensitive to his grasses as he is about his livestock. How the committee will handle this, Mr. Morris state, will be a real challenge.

Howard Foulger, Forest Service, felt we need to develop a better coordination between the rancher and sportsman. We need to look into the problems that have divided the rancher from his recreational possibilities.

Bob Raundal, State Lands and Investments, reported his organization plans to take a more active part in the management of their state lands and feels there is a definite need for such a plan.

Bob Ross, Range Conservationist for the Soil Conservation Service, is happy to see this program and will give all the support they can. He pointed

that range improvement and attitude of the ranchers in the past few years has been excellent. Five years ago it would not have been possible to get an overall Range Resource Program discussed.

Ken Meyers, Water Resources Board, will work with the committee in developing this plan.

Ole Ueland, State Soil Conservation Committee, is enthused about the program as it will give status to our grassland resource and bring out their potentials. Under this program, the various agencies will be working together for the benefit of rural and urban people as well.

C. R. Draper, Department of Planning and Economic Development, is studying the program and needs background information at this time.

Charles Meyer, Department of Agriculture, felt this is a good program.

David Ricks, Montana Water Resources Board, felt the program is a good idea for Montana.

Dean Hanson, State Soil Conservation Committee, state the education part of this program, stressing the management of a long range program, is very important. In the future farmers are going to need to know how many animal units they can manage, and all these things will have to be on a dollar basis.

Jim Posewitz, Montana Fish and Game Department, felt this program needs wide and broad support. The plan tends to encourage the hunting and fishing rights be given to others who have the funds. He feels the land owner should capitalize by providing services such as meals, lodging, guides, renting horses, etc., and not be leasing the right to use the resources for hunting or fishing. Eob Ross felt the ranchers general makeup will probably take care of this, as ranchers are hospitable people and charging for the use of land alone is not in their way of thinking.

Ned Jefferies, Cooperative Extension Service, felt this can be a valuable program. However, we need to change our approach to educate the farmers and need to talk to education specialists as to how to go about it properly. He felt the coordinator of the program will have a big job in getting people to work together.

Torlief Assheim, Cooperative Extension Service, gives his full support of the program.

Ave Linford, Soil Conservation Service, stated we need to motivate people. We will have to work with both public and private lands. This will be more important in the future than it has been in the past. Ranchers will have to look at things differently. All people will have to work together to reduce sedimentation and protect our resources. Mr. Linford felt having the Soil and Water Conservation Districts work together on these problems is important as they work directly with local people, and are located throughout the entire state.

Charles Greene, Farmers Home Administration, is just getting oriented in the program, and had no comment at this time.

The Committee appreciated the help of Ken Meyers in issuing a News Release for this meeting.

A general discussion was held concerning changes, alterations, and deletions of the program outline. Torlief Assheim suggested that many figures referred to in the plan should be either explained fully in the text or added as an appendage to supplement figures. He suggested the sheet entitled "Economic Impact of Range Improvement in Montana" be added to the plan. It was noted the potential increase of \$70,000,000 stated in the Economic Impact sheet is from the livestock industry and does not cover recreation, pollution abatement, watershed, etc. Mr. Posewitz stated their organization does not put a monetary value on their programs. It was felt the predicted increase in recreational use of the range areas of 500% by 1980 should be explained. Mr. Ueland felt detailed explanations of all the figures would help sell the program.

Gary Wicks asked why ranchers aren't using the technical services now available.

Howard Foulger stated the use of chemicals good for agriculture is sometimes not good for wildlife.

Joe Egan stated the definition of ranches in good to excellent condition should be defined. For instance, when the number and kinds of grasses are reduced, this sometimes reduces the kinds of animals also. They have experienced these difficulties with grasshoppers and deer. Mr. Egan felt this could be considered as part of the overall program.

Mr. Draper inquired about the statement made that 50% of rangelands are in good to excellent condition and wanted to know what they were previous to this and what improvements have been made. Mr. Ross said 15 years ago the figure would have been approximately 25% of the rangelands in good to excellent condition.

Don Ryerson pointed out a need to write the plan in language the rancher and sportsman both can understand.

Ned Jefferies felt the plan should be written to show range improvement based on economic return.

Mr. Draper asked if there was any legislative status of ranchers liability when sportsmen are using their lands for recreational purposes. Mr. Linford stated there has been some review of these problems and so far, legislation concerning this is still in the development stages.

Howard Foulger and Ed Zaidlicz both believe ranchers and sportsmen have a broad gap on thinking and objectives at this time. Mr. Zaidlicz felt we have to get increased allocations for fencing and water development for the

rancher.

George McGaffick stressed the need for all agencies to work together on this plan and he felt a very workable plan can be set up.

Arnold Rieder stated there is a need to get sportsmen and ranchers working together and this will help decrease vandalism on the ranchers property.

Mel Morris felt we should stress management and something should be written in the plan stressing this rather than practices, etc.

Ned Jefferies felt water development and proper fencing programs will help get better livestock distribution on the lands.

Ave Linford stated we need to get all of the technical information to the farmer that he needs to operate effectively, and this technical information comes from many departments.

Dean Hanson asked the committee what suggestions they have regarding implementation of this program, and what are their suggestions for financing. Also, where would the administration of the program be placed. Mr. Howard Foulger stated the Governor's Advisory Council recommends we go the legislative route to get the funding, which would be set up as a separate entity. Other agencies would then contribute time, effort and support the program. The Forest Service would be willing to contribute time and people to the program.

Mel Morris indicated he felt the State Soil Conservation Committee could be the administering agency because it works through the Districts and would be better equipped to handle the position. Funding, if available, could come through legislative funding. Ave Linford, Torlief Aasheim and Jim Posewitz all felt this idea is good.

Arnold Rieder stated legislature's thinking right now is to consolidate agencies rather than create new ones and feels the program would have a better chance if the coordinator position be placed in an established agency and funded through them. Howard Foulger concurred.

Jim Posewitz suggested that after the plan has been set up, the Montana Fish and Game Department be given a chance to review it to see whether it is compatible with their programs.

Ned Jefferies inquired as to what the position of the coordinator will be, because they have a range man in their organization with this position already.

Bob Ross stated the State Soil Conservation Committee has done an excellent job already. A group of District Supervisors originated the request, and the SSCC went ahead and set up Pete Jackson to organize the plan.

Torlief Aasheim felt the coordinator should be working through a committee.

Ole Ueland told the group how the State Soil Conservation Committee was formed and gave them background information.

John Schroeder moved the State Soil Conservation Committee accept and assume responsibility for the sponsoring agency for the State Rangeland Resource Program. The motion was seconded by Don Ryerson and passed.

A discussion was held on how the program should be funded. Mr. Draper stated there was some possibility the program could get a grant under the Housing and Urban Development Program, but we would have to supply matching funds.

Torlief Aasheim moved the group go on record as favoring having legislature appropriate funds to administer the program and the committee will explore other sources for funding also. The motion was seconded by Ave Linford and passed.

It was suggested we acquaint other groups such as the County Commissioners and Board of Health with the program and ask for their suggestions and comments.

Pete Jackson stated the Working Committee would take these suggestions and motions up and make necessary changes in the tentative plan which will be brought back to the group for their agreement before finalizing the program. In closing, Mr. Jackson thanked the group and stated he will be looking for their assistance in the future.

There being no further business, the meeting adjourned at 3:30 PM.

Respectfully submitted,

/S/

Robert L. Ross
Secretary



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